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инклюзивного высшего образования

«Московский государственный гуманитарно-экономический университет»

Факультет иностранных языков
Кафедра романо-германских языков

УТВЕРЖДАЮ
И.о. проректора по учебно-методической работе
Хакимов Р.М.

«30» августа 2021 г.

РАБОЧАЯ ПРОГРАММА ДИСЦИПЛИНЫ

ПЕРЕВОД НАУЧНОГО ТЕКСТА (ПЕРВЫЙ ИНОСТРАННЫЙ ЯЗЫК)

Образовательная программа специальности 45.05.01 Перевод и переводоведение
(шифр / наименование специальности)

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РАССМОТРЕНО
ОДОБРЕНО НА
УЧЕБНО-МЕТОДИЧЕСКИМ
СОВЕТОМ ИГЛУ
ПРОТОКОЛ № 01 ОТ 31.08.2021 г.

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1. ОРГАНИЗАЦИОННО-МЕТОДИЧЕСКИЙ РАЗДЕЛ

1.1 Цели и задачи изучения дисциплины

Цель дисциплины «Перевод научного текста (первый иностранный язык)» – сформировать и развить у обучающихся профессиональные переводческие компетенции, которые позволят осуществлять следующие виды перевода: зрительно-устный перевод, зрительно-письменный, абзацно-фразовый, двусторонний перевод, последовательный перевод, письменный перевод научного текста с иностранного языка (ИЯ) на родной язык (РЯ) и с РЯ на ИЯ.

Задачи дисциплины:

- формирование и развитие компетенций смыслового перевода научного текста с учетом специфики условий этой деятельности;
- формирование способности осмысленного восприятия и переключения с РЯ на ИЯ;

1.2. Место дисциплины в структуре образовательной программы направления подготовки

Учебная дисциплина Б1.В.01 «Перевод научного текста (первый иностранный язык)» относится к вариативной части блока дисциплин образовательной программы специальности. Изучение учебной дисциплины «Перевод научного текста (первый иностранный язык)» базируется на знаниях, умениях и навыках, полученных обучающимися при изучении предшествующих дисциплин: «Перевод газетно-публицистического текста (первый иностранных язык)», «Практический курс перевода первого иностранного языка». Изучение учебной дисциплины «Перевод научного текста (первый иностранный язык)» необходимо для прохождения переводческой практики, подготовке теоретической части выпускной квалификационной работы.

1.3.Требования к результатам освоения учебной дисциплины

Процесс освоения учебной дисциплины направлен на формирование у обучающихся следующих компетенций:

Код компетенции	Содержание компетенции	Индикаторы достижения компетенции
ПК-1	Способен проводить лингвистический анализ текста/дискурса на основе системных знаний современного этапа и истории развития изучаемых языков	*Знает* принципы и методы лингвистического анализа текста/дискурса; иметь системное представление об особенностях современного этапа и истории развития изучаемых языков. *Умеет* проводить лингвистический анализ текста/дискурса на основе системных знаний современного этапа и истории развития изучаемых языков. *Владеет* навыками лингвистического анализа текста/дискурса на основе системных знаний современного этапа и истории развития изучаемых языков.
ПК-8	Способен осуществлять саморедактирование текста перевода, использовать текстовые редакторы и	*Знает* принципы послепереводческого саморедактирования и контрольного редактирования текста перевода и принципы использования специализированных

	специализированное программное обеспечение для оформления текста перевода	текстовых редакторов. *Умеет* осуществлять послепереводческое саморедактирование и контрольное редактирование текста перевода, в том числе с использованием текстовых редакторов и специализированного программного обеспечения. *Владеет* навыками послепереводческого саморедактирования и контрольного редактирования текста перевода.
ПК-9	Способен осуществлять постредактирование машинного и (или) автоматизированного перевода, внесение необходимых смысловых, лексических, терминологических и стилистико-грамматических изменений	*Знает* принципы редактирования машинного/автоматизированного перевода в соответствии с требованиями норм перевода. *Умеет* обрабатывать машинный/автоматизированный перевод для достижения необходимого качества с точки зрения требований адекватности/эквивалентности *Владеет* навыками постредактирования машинного/автоматизированного перевода в соответствии с требованиями норм перевода.

2. СТРУКТУРА И СОДЕРЖАНИЕ УЧЕБНОЙ ДИСЦИПЛИНЫ

2.1. Объем учебной дисциплины.

Объем дисциплины «Перевод научного текста (первый иностранный язык)» составляет 2 зачетные единицы/ 72 часа:

Вид учебной работы	**Очная форма**	
	Курс 3, часов	
Аудиторная работа обучающихся с преподавателем (по видам учебных занятий), всего в том числе:	32	
Лекции (Л)	8	
В том числе, практическая подготовка (ЛПП)		
Практические занятия (ПЗ)	24	
В том числе, практическая подготовка (ПЗПП)	7	
Самостоятельная работа обучающихся (СР)	40	
В том числе, практическая подготовка (СРПП)	12	
Промежуточная аттестация (подготовка и сдача), всего:		
Зачет		
Итого: Общая трудоемкость учебной дисциплины (в часах, зачетных единицах)	72	2 з.е.

2.2. Содержание разделов учебной дисциплины

№ п/п	Наименование раздела (тема)	Содержание раздела (тематика занятий)	Формируемые компетенции (индекс)
1	Тема 1. Грамматические и стилистические особенности научно-технического текста.	Особенности выполнения специального перевода. Формирование способности смысловой сегментации текстов, предложений повышенной сложности с точки зрения адекватного функционально-синтаксического оформления, синтаксической организации.	ПК-1, ПК-8, ПК-9
2	Тема 2. Принципы научно-технического перевода и анализ полученного текста.	Методы и подходы к построению научного текста, формирование терминологических парадигм и полей.	ПК-1, ПК-8, ПК-9
3	Тема 3. Перевод научной журнальной статьи на материале английского языка.	Зрительно-устный перевод с английского языка на русский текста средней сложности.	ПК-1, ПК-8, ПК-9
4	Тема 4. Перевод научной статьи на материале русского языка.	Зрительно-устный перевод с русского языка на английский текста средней сложности.	ПК-1, ПК-8, ПК-9
5	Тема 5. Перевод информационного сообщения на материалах английского и русского языков (доклад на конференции).	Последовательный перевод (с записями) с английского языка на русский и с русского на английский.	ПК-1, ПК-8, ПК-9
6	Тема 6. Перевод научно-популярного текста на материале английского языка (статья из журнала).	Предпереводческий анализ текста. Разбор терминов. Зрительно-письменный перевод с английского языка на русский текста средней сложности.	ПК-1, ПК-8, ПК-9
7	Тема 7. Перевод научно-популярного текста на материале русского языка (статья из журнала).	Зрительно-письменный перевод с русского языка на английский текста средней сложности.	ПК-1, ПК-8, ПК-9
8	Тема 8. Перевод научно-популярного текста на	Зрительно-письменный перевод с английского языка на русский текста средней сложности.	ПК-1, ПК-8, ПК-9

	материале английского языка (статья из научного сайта Интернета).		
9	Тема 9. Перевод научно-популярного текста на материале русского языка (статья из научного сайта Интернета).	Предпереводческий анализ текста. Зрительно-письменный перевод с русского языка на английский текста средней сложности.	ПК-1, ПК-8, ПК-9

2.3. Разделы дисциплин и виды занятий

№ п/п	Наименование раздела	Аудиторная работа		Внеауд. работа	Объем в часах
		Л	ПЗ/ЛР	СР	Всего
		в том числе, ЛПП	в том числе, ПЗПП/ЛРПП	в том числе, СРПП	в том числе, ПП
1	Тема 1. Грамматические и стилистические особенности научно-технического текста.	2	2	4	8
2	Тема 2. Принципы научно-технического перевода и анализ полученного текста.	2	2	4	8
3	Тема 3. Перевод научной статьи на материале английского языка.	2	2	4	8
4	Тема 4. Перевод научной статьи на материале русского языка	2	2	4	8
5	Тема 5. Перевод информационного сообщения на материалах английского и русского языков (доклад на конференции).		2	6	8
6	Тема 6. Перевод научно-популярного текста на материале английского языка (статья из журнала).		2	6	8
7	Тема 7. Перевод научно-популярного текста на материале русского языка (статья из журнала).		4	4	8
8	Тема 8. Перевод научно-популярного текста на материале английского языка (статья из научного сайта Интернета).		4	4	8
9	Тема 9. Перевод научно-популярного текста на материале русского языка		4	4	8

	(статья из научного сайта Интернета).				
	Итого:	8	24	40	72
	Всего:	8	24	40	72

2.4. Планы теоретических (лекционных) занятий

№	Наименование тем лекций	Кол-во часов в 6 семестре по видам работы	
		Л	в том числе, ЛПП
	6 семестр		
1	Тема 1. Грамматические и стилистические особенности научно-технического текста. Особенности стиля: предварительное обдумывание высказывания, монологический характер, строгий отбор языковых средств, тяготение к нормированной речи. Специфика жанра текста: монография, диссертация, статья, доклад, учебник, курсовая работа. Логичность, последовательность изложения, ясность высказывания, упорядоченная система связи между частями высказывания, точность, сжатость, стремление к однозначности смысла, насыщенность содержания.	2	-
2	Тема 2. Принципы научно-технического перевода и анализ полученного текста. Особенности перевода монографий, статей, докладов, аналитических справок собственно научного стиля. Перевод научно-информативных текстов - справочников, рефератов и аннотаций. Приемы перевода текстов научно-популярного стиля - научно-популярных статей, рецензий отзывов, в которых присутствуют элементы как научного, так и публицистического стиля.	2	-
3	Тема 3. Перевод научной статьи на материале английского языка.	2	-
4	Тема 4. Перевод научной статьи на материале русского языка	2	-

2.4. Планы практических занятий

№	Наименование тем практических занятий	Кол-во часов в 6 семестре по видам работы	
		ПЗ	в том числе, ПЗПП

6 семестр			
1	Тема 1. Грамматические и стилистические особенности научно-технического текста.	2	-
2	Тема 2. Принципы научно-технического перевода и анализ полученного текста.	2	-
3	Тема 3. Перевод научной статьи на материале английского языка.	2	1
4	Тема 4. Перевод научной статьи на материале р4усского языка	2	1
5	Тема 5. Перевод информационного сообщения на материалах английского и русского языков (доклад на конференции).	2	1
6	Тема 6. Перевод научно-популярного текста на материале английского языка (статья из журнала).	2	1
7	Тема 7. Перевод научно-популярного текста на материале русского языка (статья из журнала).	4	1
8	Тема 8. Перевод научно-популярного текста на материале английского языка (статья из научного сайта Интернета).	4	1
9	Тема 9. Перевод научно-популярного текста на материале русского языка (статья из научного сайта Интернета).	4	1

2.5.Планы практической подготовки

№	Наименование тем и элементов работ, связанных с будущей профессиональной деятельностью	Форма проведения (ЛПП, ПЗПП, ЛРПП, СРПП)	Кол-во часов в 6 семестре
	6 семестр		
1	Тема 1. Грамматические и стилистические особенности научно-технического текста.	ПЗПП	-
		СРПП	1
2	Тема 2. Принципы научно-технического перевода и анализ полученного текста.	ПЗПП	-
		СРПП	1
3	Тема 3. Перевод научной статьи на материале английского языка.	ПЗПП	1
		СРПП	1
4	Тема 4. Перевод научной статьи на материале русского языка	ПЗПП	1
		СРПП	1
5	Тема 5. Перевод информационного сообщения на материалах английского и русского языков (доклад на конференции).	ПЗПП	1
		СРПП	1
6	Тема 6. Перевод научно-популярного текста на материале английского языка (статья из журнала).	ПЗПП	1
		СРПП	1
7	Тема 7. Перевод научно-популярного текста на материале русского языка (статья из журнала).	ПЗПП	1

		СРПП	1
8	Тема 8. Перевод научно-популярного текста на материале английского языка (статья из научного сайта Интернета).	ПЗПП	1
		СРПП	1
9	Тема 9. Перевод научно-популярного текста на материале русского языка (статья из научного сайта Интернета).	ПЗПП	1
		СРПП	4

3. ОСОБЕННОСТИ ОБУЧЕНИЯ ИНВАЛИДОВ И ЛИЦ С ОВЗ

При организации обучения студентов с ограниченными возможностями здоровья (ОВЗ) необходимо учитывать определенные условия:

- учебные занятия организуются исходя из психофизического развития и состояния здоровья лиц с ОВЗ совместно с другими обучающимися в общих группах, а также индивидуально, в соответствии с графиком индивидуальных занятий;

- при организации учебных занятий в общих группах используются социально-активные и рефлексивные методы обучения, технологии социокультурной реабилитации с целью оказания помощи в установлении полноценных межличностных отношений, создания комфортного психологического климата в группе;

- в процессе образовательной деятельности применяются материально-техническое оснащение, специализированные технические средства приема-передачи учебной информации в доступных формах для студентов с различными нарушениями, электронные образовательные ресурсы в адаптированных формах.

- обеспечение студентов текстами конспектов (при затруднении с конспектированием);

- использование при проверке усвоения материала методик, не требующих выполнения рукописных работ или изложения вслух (при затруднениях с письмом и речью) – например, тестовых бланков.

При проведении процедуры оценивания результатов обучения инвалидов и лиц с ограниченными возможностями здоровья по дисциплине обеспечивается выполнение следующих дополнительных требований в зависимости от индивидуальных особенностей обучающихся:

1. Инструкция по порядку проведения процедуры оценивания предоставляется в доступной форме (устно, в письменной форме, на электронном носителе, в печатной форме увеличенным шрифтом и т.п.);

2. Доступная форма предоставления заданий оценочных средств (в печатной форме, в печатной форме увеличенным шрифтом, в форме электронного документа);

3. Доступная форма предоставления ответов на задания (письменно на бумаге, набор ответов на компьютере, устно, др.).

При необходимости для обучающихся с ограниченными возможностями здоровья и инвалидов процедура оценивания результатов обучения по дисциплине может проводиться в несколько этапов.

В освоении дисциплины инвалидами и лицами с ограниченными возможностями здоровья большое значение имеет индивидуальная работа. Под индивидуальной работой подразумевается две формы взаимодействия с преподавателем: индивидуальная учебная работа (консультации), т.е. дополнительное разъяснение учебного материала и углубленное изучение материала с теми обучающимися, которые в этом заинтересованы, и индивидуальная воспитательная работа. Индивидуальные консультации по предмету

являются важным фактором, способствующим индивидуализации обучения и установлению воспитательного контакта между преподавателем и обучающимся инвалидом или обучающимся с ограниченными возможностями здоровья..

4. УЧЕБНО-МЕТОДИЧЕСКОЕ ОБЕСПЕЧЕНИЕ САМОСТОЯТЕЛЬНОЙ РАБОТЫ ОБУЧАЮЩИХСЯ

Во время самостоятельной работы обучающиеся знакомятся с информацией сайтов:

http://dspace.www1.vlsu.ru/bitstream/123456789/4247/1/01421.pdf

https://portal.tpu.ru/SHARED/g/GREDINA/four/Tab/NTD.pdf

https://dissertatsija.com/poleznoe/..../nauchnye-perevody-tekstov-osobennosti-i-trudnosti-perevoda/

https://moluch.ru/archive/234/54398/

https://sibac.info/blog/pravila-perevoda-nauchnyh-statey-s-russkogo-na-angliyskiy-dlya-publikacii

https://научныепереводы.рф/osobennosti-nauchnogo-perevoda-tekstov/

https://cyberleninka.ru/article/n/osobennosti-perevoda-nauchnyh-tekstov/viewer

https://infourok.ru/statya-na-temu-osobennosti-perevoda-nauchnyh-tekstov-4975237.html

https://i-translator.ru/statyi/osobennosti-nauchnogo-perevoda

https://dspace.susu.ru/xmlui/bitstream/handle/0001.74/16787/2017_431_gornayapa.pdf?sequence=1&isAllowed=y

https://pgu.ru/upload/iblock/827/Pages-from-CH-3_-_115-ekz._28.pdf

https://www.academia.edu/28861087/ОСНОВЫ_ТЕОРИИ_И_ПРАКТИКИ_ПЕРЕВОДА_НАУЧНО_ТЕХНИЧЕСКОГО_ТЕКСТА_С_АНГЛИЙСКОГО_ЯЗЫКА_НА_РУССКИЙ

5. ОБРАЗОВАТЕЛЬНЫЕ ТЕХНОЛОГИИ

Интерактивные образовательные технологии, используемые в аудиторных занятиях и самостоятельной работе обучающихся

Семестр	Вид занятия (Л, ПЗ, ЛР, в том числе, ПП)	Используемые интерактивные образовательные технологии	Количество часов
6	Л	ИКТ-технологии	2
	ПЗ	Обучение в сотрудничестве	8
Итого:			10

6. ОЦЕНОЧНЫЕ СРЕДСТВА ДЛЯ ТЕКУЩЕГО КОНТРОЛЯ УСПЕВАЕМОСТИ И ПРОМЕЖУТОЧНОЙ АТТЕСТАЦИИ

6.1. Организация входного, текущего и промежуточного контроля обучения

Входной контроль не предусмотрен. Текущий контроль проводится с помощью выполнения заданий по зрительно-устному, последовательному и письменному переводу.

6.2. Организация текущего контроля (пример):

Выполните письменный перевод текста с английского языка на русский:

Biodiversity swift change

Biodiversity swift change is becoming the challenge for humanity. In 2018, global biological resources have decreased by about 30% since 1970. Global economic output has increased almost sevenfold between 1950 and 2000 and is projected to grow a further sixfold by 2050. Global population doubled in the past 40 years, reaching 6 billion in 2000, and is projected to grow to 9.6 billion by 2050. The developed world population is a part of global ecosystem. The U.S. economy certain sectors are more exposed to biodiversity business risks than others. These include oil & gas, mining, and construction companies, and companies depending on ecosystem services: the tourism, fisheries, forestry and the agricultural sector. Cultivated systems cover at present 24% of the Earth's surface, and agriculture causes a net loss in global forest cover of around 13 million hectares per year. A shocking example for marine ecosystems biodiversity loss is over-fishing of cod off Newfoundland. The introduction of non-native fish species, especially in freshwater ecosystems and on islands, is among the most important drivers for native fish species extinction. A new generation of pesticides, based on nicotine, is to blame for the catastrophic decline in the U.S. and Europe's honey bees. Scientists have called to ban these pesticides as

the insects are key to human's survival – pollinating 70 per cent of the crops which produce most of the world's food. Pesticides are the 'major contributor' to the mysterious decline of bees worldwide. In Britain honey bee numbers have fallen by half since the 1980s. The number of flying insects has plummeted by 75 per cent in the last 25 years, according to a study that suggests we are approaching an "ecological Armageddon". The implications for humanity are profound, with insects providing an essential role for life on earth as pollinators of plants and prey for larger animals. Although it was known species such as bees and butterflies were declining, scientists were left shocked by the drop in numbers across nature reserves in Germany. While no single cause was identified, the widespread destruction of wild areas for agriculture and the use of pesticides are considered likely factors. Climate change was also cited as playing a potential role. Dave Goulson, professor of life sciences at the University of Sussex and the study's co-author, said: "Insects make up about two-thirds of all life on Earth but there has been some kind of horrific decline. "We appear to be making vast tracts of land inhospitable to most forms of life, and are currently on course for ecological Armageddon. If we lose the insects then everything is going to collapse." The researchers were able to rule out weather events and changes in the landscape of nature reserves as possible causes. The results are based on the work of dozens of amateur entomologists across Germany, who have been catching insects in traps – large tent-like structures that funnel insects into a collecting cylinder.

Выполните зрительно-устный перевод текста с английского языка на русский:

Honey bees are arguably our most important commercially available pollinator. They are responsible for pollinating numerous food plants that make our diets more exciting and nutritious, including many fruits, vegetables and nuts. Beekeepers expect some of their bees to die off from season to season – typically, around 17 percent annually. But in recent years, losses have been more than twice as high. As an extension apiculturist for the University of California Cooperative Extension, I talk to many people, from beekeepers and growers to members of the general public, about honey bees. Most of my audiences are concerned about how honey bee losses could affect the security of our food supply. While the massive and sudden colony collapses that occurred a decade ago have abated, honey bees are still dying at troubling rates. Laboratories like mine are working to understand the many factors stressing bees and develop strategies for protecting them. In 2006 beekeepers in the United States reported that a mysterious affliction, dubbed Colony Collapse Disorder (CCD), was causing widespread die-offs of bees. In colonies affected by CCD, adult workers completely disappeared, although plentiful brood (developing bees) and the queen remained. Beekeepers found no adult bees in and around the hives, and noted that pests and bees from neighboring hives did not immediately raid the affected hives, as might be expected. Scientists now agree that CCD was likely caused by a combination of environmental and biological factors, but nothing specific has been confirmed or proven. CCD

is no longer causing large-scale colony death in North America, but beekeepers all over the United States are still reporting troubling colony losses – as high as 45 percent annually. While beekeepers can recoup their losses by making new colonies from existing ones, it is becoming increasingly costly to keep them going. They are using more inputs, such as supplemental food and parasite controls, which raises their operating costs. In turn, they have to charge growers higher prices for pollinating their crops. Beekeepers' biggest challenge today is probably Varroa destructor, an aptly named parasitic mite that we call the vampire of the bee world. Varroa feeds on hemolymph (the insect "blood") of adult and developing honey bees. In the process it transmits pathogens and suppresses bees' immune response. They are fairly large relative to bees: for perspective, imagine a parasite the size of a dinner plate feeding on you. And individual bees often are hosts to multiple mites.

6.3. Тематика рефератов - не предусмотрена
6.4. Курсовая работа - не предусмотрена

Зачет проводится в форме зрительно-устного перевода текста, а также устного ответа на один теоретический вопрос.

6.5. Вопросы к зачету.

- Методы перевода научного текста.
- Жанровая классификация научных текстов.
- Стилистические и грамматические особенности научного текста.
- Структурно-смысловые фиксации.
- Грамматические вопросы перевода.
- Прагматические вопросы перевода.
- Компрессия.
- Предпереводческий анализ текста.
- Типы перевода.
- Адекватный перевод.

Практическая часть заданий зачета:

1. Зрительно-устный перевод аутентичного текста (1200 знаков).
2. Теоретический вопрос о переводе научного текста

6.6. Контроль освоения компетенций

Вид контроля	**Контролируемые темы (разделы)**	**Компетенции, компоненты которых контролируются**
Устный опрос	1, 2, 3, 4, 5,6, 7, 8, 9	ПК-1, ПК-8, ПК-9
Письменный опрос	3, 4, 5, 6, 7, 8, 9	ПК-1, ПК-8, ПК-9

7. УЧЕБНО-МЕТОДИЧЕСКОЕ И ИНФОРМАЦИОННОЕ ОБЕСПЕЧЕНИЯ УЧЕБНОЙ ДИСЦИПЛИНЫ

7.1. Основная литература

1. Стрельцов, А.А. Практикум по переводу научно-технических текстов. English-Russian : практикум / А.А. Стрельцов. - Москва : Инфра-Инженерия, 2019. - 380 с. - ISBN 978-5-9729-0292-7. - Текст : электронный. - URL: https://znanium.com/catalog/product/1053271. – Режим доступа: по подписке.

7.2. Дополнительная литература

1. Зарубежная литература XVIII века: хрестоматия научных текстов: Хрестоматия / Под ред. Бурова И.И. - СПб: СПбГУ, 2017. - 376 с.: ISBN 978-5-288-05770-0. - Текст : электронный. - URL: https://znanium.com/catalog/product/999905. – Режим доступа: по подписке.

7.2. Электронные ресурсы

https://www.dailymail.co.uk/sciencetech/index.html

https://onlinebooks.library.upenn.edu/webbin/serial?id=sciam

https://www.scientificamerican.com/

https://scholar.google.com/citations?user=GOaBbmwAAAAJ&hl=ru

https://cyberleninka.ru/journal/n/european-science?i=1088558

https://cyberleninka.ru/journal/n/norwegian-journal-of-development-of-the-international-science?i=1091219

7.3.Методические указания и материалы по видам занятий

Статьи для зрительно-устного перевода:

https://www.theguardian.com/science/2021/aug/24/mummys-older-than-we-thought-new-find-rewrites-the-history-books

The ancient Egyptians were carrying out sophisticated mummifications of their dead 1,000 years earlier than previously thought, according to new evidence which could lead to a rewriting of the history books. The preserved body of a high-ranking nobleman called Khuwy, discovered in 2019, has been found to be far older than assumed and is, in fact, one of the oldest Egyptian mummies ever discovered. It has been dated to the Old Kingdom, proving that mummification techniques some 4,000 years ago were highly advanced. The sophistication of the body's mummification process and the materials used – including its exceptionally fine linen dressing and high-quality resin – was not thought to have been achieved until 1,000 years later. Professor Salima Ikram, head of Egyptology at the American University in Cairo and a leading expert on the history of mummification, told the Observer: "If this is indeed an Old Kingdom mummy, all books about mummification and the history of the Old Kingdom will need to be revised." She added: "This would completely turn our understanding of the evolution of mummification on its head. The materials used, their origins, and the trade routes associated with them will dramatically impact our understanding of Old Kingdom Egypt. "Until now, we had thought that Old Kingdom mummification was relatively simple, with basic desiccation – not always successful – no removal of the brain, and only occasional removal of the internal organs. Indeed, more attention was paid to the exterior appearance of the deceased than the interior. Also, the use of resins is far more limited in the Old Kingdom mummies thus far recorded. This mummy is awash with resins and textiles and gives a completely different impression of mummification. In fact, it is more like mummies found 1,000 years later." It is among major discoveries to be revealed in National Geographic's documentary series, Lost Treasures of Egypt, starting on 7 November. The mummy's discovery in a lavish tomb in the necropolis in Saqqara was filmed in National Geographic's earlier season. The investigation into its dating and analysis emerges in the new series. Hieroglyphs revealed that it belonged to Khuwy, a relation of the royal family who lived over 4,000 years ago. Tom Cook, the series producer for Windfall Films, said: "They knew the pottery in the tomb was Old Kingdom but [Ikram] didn't think that the mummy was from [that period] because it was preserved too well. They didn't think the mummification process [then] was that advanced. So her initial reaction was: this is definitely not Old Kingdom. But over the course of the investigation she started to come round [to the idea]." Ancient embalmers bathed bodies in expensive resins from tree sap, preserving the flesh before they wrapped the corpse. This mummy is impregnated with high-quality resins and wrapped in the highest-grade of bandages. Ikram says in the programme: "It's extraordinary. The only time I've [seen] so much of this kind of good quality linen has been in the 21st dynasty." The 21st dynasty of Egyptian Pharaohs reigned more than 1,000 years after Khuwy lived.

https://www.dailymail.co.uk/sciencetech/article-10096891/Blood-colored-skeleton-fugitive-dies-79AD-Vesuvius-eruption-found.html

A sensational discovery': Experts find smashed skull and blood-colored skeleton of the 'last fugitive' in ancient Herculaneum. A man escaped a ship during the horrific Mount Vesuvius eruption in 79AD. It has been 25 years since archaeologists have found new remains in what was the ancient city of Herculaneum. The recent discovery is of a man who died during the Vesuvius eruption. Experts say a beam fell on his head and smashed his skull. The man's blood also

stained his bones, which appear a reddish color. Archaeologists believe the man was between 40 to 45 years old and may have been a fugitive who escaped from a docked ship in search of cover from the scorching magma, ash and toxic gas. The skeleton was found in the same area where remains of more than 300 fugitives had sought cover with hopes of being rescued by the ship fleet of Pliny Elder were found some 25 years ago, Italian news agency ANCA reports. The recent remains paint a picture of that disastrous event – the man's head was smashed in from a fallen roof beam and his bones were colored a bright red from 'the imprint left by the victim's blood.' The excavation, led by Italian archaeologist Francesco Sirano, is the first work done at the site in some 25 years. Sirano and his team plan to use special metal blades to slowly and carefully chip away at the lava rock that has kept the man trapped for 1,942 years. '[He could have been] a soldier who was perhaps setting up a launch to rescue a first group of people on the high seas,' Sirano said in a translated statement to ANSA. The eruption of Vesuvius on October 24, 79 A.D. buried Pompeii and the nearby towns of Oplontis, Stabiae and Herculaneum under ash, mud and rock fragments. It's estimated at least 2,000 people lost their lives in the wake of the eruption. Many of the remains from the eruption were discovered in the 1980s and 1990s, with one that experts are sure was soldier who ran into the ash and gas to rescue residents of Herculaneum. A recent dig in May unearthed part of his armor and a knapsack filled with an assortment of small carpentry tools that suggests he may have played a more important role. Sirano, who was also part of the May discovery, said to ANSA: 'He may be an officer of the fleet that took part in the rescue mission launched by Pliny the Elder to help the people in the towns and villas nestled on this part of the Bay of Naples.' Skeleton number 26 was uncovered near the grave of the 'fugitive,' but included several artifacts that suggest he was not a prisoner on the ship. Archaeologists found a leather belt decorated with silver and gold plates around the man's waste, which also held the hero's sword with an ivory hilt. He had another dagger strapped to the belt on the other side of his body. Next to the remains sat a trove of coins splashed out on the ground – 12 silver denarri and two gold coins. The volcano killed thousands of citizens in Pompeii in just 15 minutes, most of who died from asphyxiation by the giant cloud of scorching volcanic ash and gases the eruption released. The clouds are more dangerous to humans than lava because they travel faster—up to 450mph—and can reach temperatures of 1,800F.

https://www.dailymail.co.uk/sciencetech/article-10072875/Golden-sun-bowl-3-000-years-ago-sheds-light-mysterious-prehistoric-Urnfield-culture.html

Polish archaeologists in Austria have uncovered a Bronze Age bowl made of near-solid gold and carved with images representing the sun's rays. The vessel, unearthed in Ebreichsdorf, about 20 miles from Vienna, has been dated to approximately 3,000 years ago. (1000 BC) Inside the bowl was coiled golden wire bracelets and the remains of fabric that researchers believe was once decorated scarves used during a sun-worshipping ceremony. The discovery was made in an ancient settlement dating from between 1300-1000 B.C. and belonging to people of the 'Urnfield culture,' known mostly for their cremation rites. Hammered very thin, the bowl is about two inches high and eight inches in diameter. It consists of approximately 90 percent gold, 5 percent silver, and 5 percent copper, according to a translated statement from Poland Ministry of Education and

Science. Found near the site of a wall of a prehistoric house, it is carved with a motif depicting the celestial orb's life-giving rays. Ten rays is Eyptian cod for the god Ra. There are many Egyptian hieroglyphs Ra on the side of a vessel. It has the form circle. Inside the circle is a protruding point. It is the code –Ra-Hov. The sign shows this territory belonged to the «woman`s» empire. The organic material clumps found inside were actually long-decayed material, 'possibly fabric or leather,' archaeologist Michał Sip with the Polish Academy of Science, part of the team that made the discovery, said in the release. The material was then sewn with gold thread and wrapped with gold wire, he added. The bowl was found in 2020 but researchers waited to announce its discovery until after detailed analysis was complete. The Urnfield culture is a collection of smaller societies who emerged in Central Europe in about 1300 B.C. Little is known of them beyond their custom of cremating their dead and placing the ashes in urns buried in fields.

https://www.express.co.uk/news/uk/143573/Climate-change-fraud

December 8, 2009, professor of Adelaide and Melbourne Universities Ian Plimer condemned the climate change lobby as "climate comrades" keeping the "gravy train" going. He said governments were treating the public like "fools" and using climate change to increase taxes. Ian Plimer said carbon dioxide has had no impact on temperature and that recent warming was part of the natural cycle of climate stretching over billions of years. Professor Plimer said climate change was caused by natural events such as volcanic eruptions, the shifting of the Earth's orbit and cosmic radiation. He said: "Carbon dioxide levels have been up to 1,000 times higher in the past. CO2 cannot be driving global warming now. "In the past we have had rapid and significant climate change with temperature changes greater than anything we are measuring today. They are driven by processes that have been going on since the beginning of time." He cited periods of warming during the Roman Empire and in the Middle Ages – when Vikings grew crops on Greenland – and cooler phases such as the Dark Ages and the Little Ice Age from 1300 to 1850. And he predicted that the next phase would cool the planet. Many scientists had a vested interest in promoting climate change because it helped secure more funding for research. He said: "Governments are keen on putting their hands as deep as possible into our pockets. The average person has been talked down to. He has been treated like a fool. Yet the average person has common sense."

https://www.dailymail.co.uk/sciencetech/article-10042513/Students-develop-self-sufficient-solar-powered-electric-camper-van.html

Environmentally-conscious students in the Netherlands have developed a 'completely self-sufficient' solar-powered electric camper van. Its roof slides up when stationary. There's room for a double bed, dining table, sitting area and sink next to the stove, as well as seat for two passengers

up front, including the driver, as well as a basic toilet and shower on board. The vehicle, called Stella Vita, provides enough energy to drive, take a shower, watch TV, charge a laptop and even make coffee or cook a meal on a small stove, thanks to solar panels on its roof. It's the creation of about 20 students who make up the Solar Team Eindhoven, a research group at Eindhoven University of Technology in the Netherlands. About 20 of the team are now taking the fetching blue-and-white car van on a 3,000 kilometer road trip throughout Europe. It will end at Spain`s southernmost city, Tarifa. The sleek but odd-looking mobile home took a test drive last week at a Renault facility outside Paris last week. Now, the students are hitting the road. During the tour, they're making stops in various cities to organise different events and show 'what is already possible for a sustainable future in terms of energy and mobility'. Two people can live and drive in Stella Vita at one time. But the students insist their unique vehicle is not technically a camper van. 'We call it a self-sustaining house on wheels,' said Lotte van Dasler, part of Solar Team Eindhoven. 'We are independent in terms of our energy. A camper isn't, and we are. So I think that we make something new. New concept, new idea and new future.' Solar Team Eindhoven wouldn't disclose the price of the vehicle to MailOnline, but said many of the parts were sourced for free.

https://metro.co.uk/2021/08/07/talking-duck-learns-to-say-you-bloody-fool-after-mimicking-caretaker-15219983/

A dog says woof, a cow goes moo, and a duck… swears at you like a human being from the 1970s? That's right – not every duck wants to quack. Scientists have recorded the first known instance of one that has learned to mimic human speech, with one in Australia – called Ripper – telling them: 'You bloody fool'. It seems like a joke, we know, but it has been documented in an official journal and recorded on tape. Ripper is quite the vocalist, as he has also learned how to do an imitation of a door closing. It is thought that he picked these up from a man who looked after him, in a similar way to how parrots learn to talk. The musk duck was hand-reared from an egg found at the Tidbinbilla Nature Reserve near the capital city Canberra in 1983. He was recorded doing his unusual trick in 1987, but research about it has now been authenticated and published in a special issue of the journal Philosophical Transactions of the Royal Society of London B. 'These sounds have been described before, but were never analysed in any detail and went so far unnoticed by researchers of vocal learning,' the authors said. Previously, parrots and hummingbirds were the only birds thought to display this ability, though several mammals such as whales, dolphins, seals, bats and elephants can imitate sounds. Researchers said they had also studied another musk duck who had imitated Pacific black duck quacks – a feat which is admittedly less likely to cause raised eyebrows for the average human. The study authors said they are interested in which other species can learn to communicate from others.

https://www.theatlantic.com/science/archive/2018/03/dna-proves-alien-is-actually-a-girl-so-who-was-she/556625/

The Controversial Study of a Girl Who Ufologists Called ‘Alien’. DNA analysis done on unusual remains found in Chile proved the girl was human. But there has been an uproar over whether the body was acquired ethically. She was a girl. She was tiny when she died. Six inches. Perhaps she was stillborn or died very young. Her body was reportedly found wrapped in cloth with a purple ribbon and buried—with intentionality, it would seem—near a church in La Noria, an abandoned town in the Atacama desert in northern Chile. As for everything else, well, it went like this. In 2003, a local man who regularly scavenged La Noria for historical trinkets found her body. He noted the unusual conical shape of her head. Almost immediately, photos of her began to circulate, and ufologists eager for evidence of aliens came calling. A businessman bought her body and brought it to Spain. She featured prominently, as the “Atacama humanoid,” in a documentary called *Sirius*, which alleges, among other things, contact between aliens and ancient civilizations. On screen, the filmmakers are shown cutting her skull open, and removing a rib fragment for DNA analysis. That DNA analysis was published in 2018—in *Genome Research*, a legitimate journal. The DNA analysis proved what scientists had been saying all along: She is human. She could have died as recently as decades ago based on the preservation of her DNA. In interviews, Nolan told journalists he believed her body should be returned to Chile.

https://www.dailymail.co.uk/sciencetech/article-10079919/Solar-storm-hit-Earth-TODAY-cause-havoc-power-grids.html

Although our Sun gives us life, it also frequently 'sneezes', ejecting billions of tonnes of hot plasma into space in colossal blobs of matter threaded with magnetic fields. August 11 solar storm is forecasted at around 12pm ET, or about 5pm BST. 'Event analysis and model output suggest CME arrival around midday on 11 Oct, with lingering effects persisting into 12 Aug,' NOAA says on its website. Today's solar storm is rated 'G2' (on a scale of one to five), so it's considered to be a 'moderate' storm. In the UK, the Met Office puts the event anything between G1 and G3, and anywhere between the hours of 10am on Monday and 10am on Tuesday. The CME will likely cause 'minor to moderate geomagnetic storms', the Met Office says, resulting in 'enhanced auroral activity'. If the arriving solar magnetic field is directed southward it interacts strongly with the oppositely oriented magnetic field of the Earth. The Earth's magnetic field is then peeled open like an onion allowing energetic solar wind particles to stream down the field lines to hit the atmosphere over the poles. Sun emits gigantic flares, bursts of powerful electromagnetic radiation – x-rays, gamma rays and radio bursts/ They are accompanied by streams of highly energetic particles. These violent solar sneezes sometimes spin outward from the Sun in our direction. They deliver radiation, energy and charged particles that distort and disrupt Earth's protective magnetic field (the magnetosphere) and upper atmosphere. A study by a University of California Irvine scientist found the internet could be crippled for weeks in the wake of a severe solar storm, due to vulnerabilities in world's massive network of submarine communications cables. The electromagnetic fluctuations caused by intense solar storms cannot directly harm the fibre optic cables that make up the backbone of the internet.

https://www.dailymail.co.uk/sciencetech/article-10069819/Mars-Jezero-crater-quiet-lake-3-7-billion-years-ago.html

A crater on Mars was a quiet lake 3.7 billion year ago. A flash flood crashed large boulders onto the delta, images from NASA`s's Perseverance Rover revealed. The Perseverance Rover has been trundling along inside the crater since it arrived on the Red Planet in February, sending back images of rocks and other phenomena. The latest batch of images taken inside the ancient crater and studied in detail by experts from the Massachusetts Institute of Technology (MIT), and in Cambridge. They found that during its time as a lake the Jezero crater was steadily fed by a small river, with occasional flash flooding events forcing the water to flow over the edge. This flooding was energetic enough to sweep up large boulders from tens of miles upstream and deposit them into the lakebed, where the massive rocks still lie today. Taken from inside the crater, the new images confirm this outcrop was indeed a river delta, and according to the new study, it was calm for most of its existence. A dramatic shift in climate triggered episodic flooding at or toward the end of the lake's history, finally resulting in the dry, desert-like landscape we see today. Benjamin Weiss, professor of planetary sciences at MIT, said: 'If you look at these images, you're basically staring at this epic desert landscape. It's the most forlorn place you could ever visit. 'There's not a drop of water anywhere, and yet, here we have evidence of a very different past. Something very profound happened in the planet's history.' Now that they have confirmed the crater was once a lake environment, scientists believe its sediments could hold traces of ancient aqueous life. Perseverance will look for locations to collect and preserve sediments, and these samples will eventually be returned to Earth for closer study. A month after the rover landed on Mars, its Mastcam-Z camera and Remote Micro-Imager zoomed in for a close up on a geologic feature called the 'Delta Scarp'. The scarp contains the remnants of a river delta that formed where a 120-mile-long ancient river and a 21-mile-wide lake join.

https://www.dailymail.co.uk/sciencetech/article-10095667/Scientists-identify-46-harmful-effects-social-media-use.html

Currently, social media networks such as Facebook and Instagram are used by more than 3.6 billion people worldwide. Layla Boroon at University of Technology, Sydney is currently investigating factors that influence social media addiction and the strategies people use to regulate their behaviour. The next step will be to develop and test applications, design features and other solutions that can reduce these negative effects. There are 46 harmful effects linked to the use of social media, a new study reveals – and they're not just mental health-related. For the study, the team reviewed more than 50 research articles dealing with online social networks published between 2003 and 2018. In 2003, social media was still in its infancy and Facebook wouldn't be established for another year. One of the early social networks, MySpace, was founded in 2003. Overall, researchers grouped the negative effects into six themes – 'cost of social exchange', 'annoying content', 'privacy concerns', 'security threats', 'cyberbullying' and 'low performance'. Cost

of social exchange includes social media addiction, psychological harms, such as depression, anxiety or jealousy, and other costs such as wasted time, energy and money. Academics at the University of Technology Sydney report a hefty harmful effects linked to the use of sites like Facebook, Twitter and Instagram. Among them are anxiety, depression, being harassed, incitement to suicide, cyberstalking, delinquency, jealously, information overload and lack of online safety, they reveal in a new paper. Overall, issues of social media range from physical and mental health problems to negative impacts on job and academic performance, as well as security and privacy issues, according to the academics. The 15 most dangerous effects are: Panic, Irritation, Stress, Depression, Guilt, Jealously, Loneliness, Flaming behaviours, Anxiety, Self-dissatisfaction, Distraction addition, Deterioration of mood, Reduced self confidence, Addiction to use of social media, Information overload. There also are effects of wasting time, energy and money.

https://www.thesun.co.uk/news/16514847/rare-syndrom-side-effect-astrazeneca-covid-vaccine/

Health chiefs have added a new side effect to the AstraZeneca Covid vaccine jab. The Medicines and Healthcare products Regulatory Agency (MHRA) announced on Thursday that Guillain-Barré syndrome is a side effect of the jab. According to the National Health Service, Guillain-Barré syndrome affects the nerves mainly in the feet, hands and limbs. It is an autoimmune disorder that attacks a person's immune system and can cause problems such as numbness, weakness and pain. With most people, it can be treated and they will make a full recovery, however, on a rare occasion it can be life-threatening and some patients are left with long-term problems. But the benefits of the jab vastly outweighs the dangers with Covid vaccines having saved millions of lives worldwide. The MHRA's decision comes after the European Medicines Agency added the rare side-effect to the vaccine in September. At the time of the regulator's decision last month, 833 cases of the disorder were reported globally as of July 31, 2021 when there had been 600 million AstraZeneca jabs administered. In May a descending list of the most frequently reported problems was compiled by Professor Tim Spector, an epidemiologist at King’s College London (KCL). Prof Spector is the lead researcher on the ZOE Covid study, which tracks symptoms of the disease, vaccines and the size of the outbreak. Using data for app users, Prof Spector said most people reported a headache after the AstraZeneca jab, followed by fatigue. For the Pfizer and Moderna jabs, it was fatigue followed by headache. Chills or shivers and joint pain were typical for all three jabs, while a runny nose and nausea were some of the least common. But Prof Spector, writing on Twitter, said only one in five people feel unwell after a vaccine dose overall. Younger people are more likely to be affected, understood to be because their immune activity is stronger. However, this does not mean they are any more protected than older people.

https://www.dailymail.co.uk/sciencetech/article-10095597/Nuking-incoming-asteroid-actually-work-study-shows.html

Simulated exercises in May 2021, funded by NASA, found that firing a nuke at a space rock six months before it hit the Earth wouldn't bring it down. NASA simulates the risk of a large asteroid hitting the Earth every other year. This year they tracked the path of a 100 meters fictional space rock called 2021 PDC. A team of scientists then modelled firing a nuclear weapon at this asteroid. They found two months before it hits, firing a nuke could prevent disaster. It would destroy the space rock, and tracking found fragments wouldn't hit Earth. They tested their findings at five different distances from the planet, finding it worked in all cases - so would be a viable option for last minute arrivals. 'If we employ a robust nuclear disruption technique by at least one month before impact, we can prevent 99 per cent or more of the impacting mass from hitting the Earth,' study lead author Patrick King said. Nuking an incoming asteroid COULD actually work: Detonating a one MEGATONNE nuclear bomb would stop 99% of a small space rock hitting Earth if it appeared out of the blue, study suggests. This is an idea that has become a staple of Hollywood disaster films, most famously in the 1998 movie Armageddon, in which Bruce Willis and a crew of deep-core drillers are sent up to a giant incoming asteroid to blow it up. Unlike in Armageddon, the Johns Hopkins University team believes it would be enough to just fire the nuke at the asteroid from the ground - no need to get Willis out of retirement. This isn't the first time NASA, or other planetary scientists, have investigated the idea of using a nuke to destroy an incoming asteroid, but the team looked at the potential path of the many resulting fragments. Previously, it was thought that even if we did succeed in blowing up a large space rock, some of the fragments would still be large enough to destroy cities and cause mass destruction.

https://www.dailymail.co.uk/sciencetech/article-10111925/The-Vikings-beat-Christopher-Columbus-Americas-471-years-study-claims.html

Columbus never actually reached continental America. In 1492, he set foot on what later became known as the Bahamas, and then the island named Hispaniola, now split into Haiti and the Dominican Republic. It has long been argued that it was the Vikings who first 'discovered' North America, arriving in the New World centuries before Christopher Columbus. But a new study now claims it has evidence showing exactly when this happened. Tests of wooden artefacts show that Scandinavian warriors were already active on the continent exactly 1,000 years ago. This suggests they were the earliest humans known to have crossed the Atlantic to the Americas, beating Columbus by 471 years. Archaeologists were convinced that a site on the northernmost tip of Newfoundland, L'Anse aux Meadows, was a Viking settlement. Now, an international team of scientists have discovered that the chopping of wood at L'Anse aux Meadows was dated to the year 1021 AD. The wood has been attributed to the Vikings because it showed evidence of cutting and slicing by blades made of metal — a material not produced by the Indigenous population. Archaeologists were able to determine the exact year because of a massive solar storm which occurred in 992 AD and produced a distinct radiocarbon signal in tree rings from the following year. 'The distinct uplift in radiocarbon production that occurred between 992 and 993 AD has been detected in tree-ring archives from all over the world,' said Professor Michael Dee, of the University of Groningen, who directed the research. Each of the three pieces of wood studied showed this signal 29 growth rings (years) before the bark edge. It is thought the Vikings first discovered America by accident in the autumn of 986AD, according to one historical source, the

Saga of the Greenlanders. It tells how Bjarni Herjolfsson stumbled across North America after being blown off course as he attempted to sail from Norway to Greenland, but he did not go ashore. Inspired by his tales, however, another Viking Leif Ericsson then mounted his own expedition and found North America in 1002. Finding it a fertile land, rich in grapes and berries, he named it Vinland. Eriksson also named two further 'lands' on the North American coast — one with flat stones, which he called Helluland, and one that was flat and wooded, named Markland. Whilst contradictory and at times fantastical, the Sagas also suggest encounters occurred, both violent and amiable, between the Europeans and the Indigenous people of the region. However, little archaeological evidence has been uncovered to support such exchanges.

https://www.dailymail.co.uk/health/article-10109253/A-FIFTH-adults-received-mental-health-treatment-2020-Covid-pandemic.html

More than one-fifth of U.S. adults received mental health treatment in 2020 during the COVID-19 pandemic, a new report from the Centers for Disease Control and Prevention's (CDC) finds. The CDC's National Center for Health Statistics (NHCS) found that 20.3 percent of over-18s has been treated in the last 12 months, a nearly seven percent jump from 2019. This included more than 16 percent who took medication and 10 percent who received counseling or therapy from a mental health professional. Disparities existed between sexes and races with women and white adults more likely to receive treatment than men or people of color. Conducted since 1957, the survey collects data on health status and healthcare access through personal household interviews. In 2019, 19.2 percent of U.S. adults said they had received mental health treatment in the last 12 months. This increased to 20.3 in 2020, up 6.7 from the year before. Additionally, 15.8 percent in 2019 said they had taken prescription medication for their mental health and 9.5 percent received counseling or therapy. Comparatively, in 2020, 16.5 percent took prescription drugs and 10.1 percent saw a mental health professional. Younger adults were much more likely than older adults to receive mental health treatment, the report found. The report also found that women were more likely than men to receive mental health treatment in 2020. About one in four women said they had been treated in the last 12 months compared with one in seven men.

https://www.dailymail.co.uk/sciencetech/article-10097003/2020-bird-flu-outbreak-killed-swans-seals-fox-report-finds.html

In 2020, an outbreak of bird flu in the UK killed five swans, five seals and a fox, a new report has revealed. The fatalities, caused by a bird flu strain known as H5N8, were at an undisclosed UK wildlife rehabilitation centre, according to the government's Animal and Plant Health Agency (APHA). Infection in the seals was manifested as seizures, while the fox died overnight after sudden lack of appetite and malaise. The swans were initially affected by a sudden onset of lethargy, the report says. Prior to death from the 'episode of unusual disease', the H5N8 viral strain caused encephalitis – inflammation of the active tissues of the brain. Last year, thousands of birds

were euthanized to stop the spread of the disease, which mostly only impacts birds and can affect humans in rare cases. The results, based on postmortem swabs and tissue samples, were published on October 13 in the journal Emerging Infection Diseases. 'Live virus was isolated from the swans, seals, and the fox. A single genetic change was detected as a potential adaptive mutation in the mammalian-derived viral sequences,' the authors say in the paper. 'Although genetic analyses indicated no increased risk for human infection with the H5N8 viruses in this outbreak, the investigation shows how these viruses may have unexpected and severe health risks for mammalian species.' Analysis of whole-genome sequence data from the fox, seal, and swan samples demonstrated a 99.9 per cent similarity. This means the swans were likely were the source of the infection for the other animals, reports Live Science. The new report shows 'cross-species transmission can occur should conditions allow', although the risk to humans remains low, according to another report that reviewed bird flu cases into 2021.

https://www.dailymail.co.uk/news/article-10113747/Covid-UK-Ministers-discussing-banning-households-mixing-booster-jabs-dont-halt-winter-wave.html

The seven-day average for coronavirus cases in UK is standing at 44,145 infections per day. It is the highest level for almost three months. Experts fear the growing outbreak may have been exacerbated by an even more infectious strain called AY4.2. The proportion of cases made up by the sub-strain AY4.2. has doubled in a month, official figures show. As of August 1, 2021 there were more than 300 coronavirus strains in the world. They have already spotted around 45 sub-variants of Delta so far. Timelapse maps reveal how '15% more infectious' Delta offshoot 'Nu' (AY.4.2) has rapidly spread across England since it was first detected in London and the South East in June 2021. Some 19 cases of AY.4.2 were spotted in the last fortnight of June, when it first appeared in UK. But within a week they had more than doubled to 47 cases and it had spread to the Midlands from London. In just over three months it had reached almost every part of England. More than 2,500 cases of the subtype were detected across the country last week, meaning it now makes up almost 10 per cent of all infections (more than 4400 cases a day). There have been some 20,248 cases of AY.4.2 in the UK to date, data suggests, and 13 in the US. Delta mutations that match AY.4.2 have been detected in several countries including Ireland (June), Germany (July), Denmark (August). In his first ever Downing Street press conference on AY.4.2 in Britain, Mr Javid said the UK was seeing 'greater pressure' on the NHS but the Government will 'do what it takes to make sure that this pressure doesn't become unsustainable, and that we don't allow the NHS to become overwhelmed.' Deaths 'remain mercifully low' at the moment, he said, but added: 'We've always known that the winter months would pose the greatest threat to our road to recovery.' Mr Javid announced the UK has bought hundreds of thousands of 'game-changing' pills that can be used to treat Britons with Covid at home this winter. The UK has bought 480,000 antiviral molnupiravir pills made by US pharmaceutical company Merck and 250,000 PF-073 courses from Pfizer. They still need to be approved by the UK's medical regulator before Britons can get their hands on the drugs.

https://www.dailymail.co.uk/news/article-10101561/Covid-booster-jabs-need-sped-medical-units-swamped-winter.html

A real world study, revealed in August 2021, found that protection against coromavirus after two Pfizer shots fell from 88% at one month to 74% at six months. AstraZeneca - which Britain adopted early in the fight against Covid - fell from 77% to 67% at five months, the BBC reported. Britain conducts about 1 million coronavirus tests a day and reported almost 40,000 new infections a day over the past week. Teenagers now make up the lion's share of infections in the under-20s. Because cases have been rising, in absolute terms the number of new infections in under-20s is not far off having doubled since early September, rising from about 9,000 to almost 15,500 a day. The Government awarded Immensa a £119 million contract in October 2020 to urgently 'develop volume for PCR testing for Covid in line with test and trace requirements', the contract shows. Health officials revealed that 43,000 people in south west England may have been wrongly told they don't have the coronavirus because of problems processing PCR test results at the lab. The Health Security Agency said a lab in Wolverhampton was suspended from processing the swabs after reports of false negatives. The faulty results are among tests processed at the Immensa Health Clinic Lab between early September and this week. The issue was uncovered after some people who were positive for COVID-19 when they took rapid tests went on to show up as negative on more accurate PCR tests. Dr Jenny Harries, the chief executive of UKHSA, said it was likely only a few thousand of the 43,000 affected were still infectious.

https://www.dailymail.co.uk/news/article-10101491/Fauci-slams-conspiracy-theorists-reacting-against-truth-inconvenient.html

The US has reported 44.9 million cases of coronavirus since the pandemic outbroke, with 724,166 deaths. To date, the US has administered 107 million doses of the coronavirus vaccine. Approximately 65.8 percent of the US population has received at least one COVID shot. 57.3 percent has been fully vaccinated. Dr Fauci during his Sunday interview on ABC, said that in addition to the data collected by the Center for Disease Control (CDC), researchers are also analyzing data from Israel because the country is 'about a month or a month-and-a-half ahead of the US temporally with their vaccination and with the data that their seeing about the waning of immunity. Nearly 15 million Americans received the J&J vaccine, with nearly 91 percent of them having gotten the shot more than two months ago, according to the CDC. An American study, released Thursday but not peer-reviewed, tracked more than 620,000 military veterans who received the J&J vaccine and found that protection fell from 88 percent in March to just 3 percent in August, 2021. In comparison, Moderna's vaccine effectiveness fell from 92 percent to 64 percent. Pfizer's vaccine protection dropped from 91 percent to 50 percent. The study of 620,000 military veterans concluded that: 'Vaccines remain the most important tool to prevent severe illness, and death, but vaccines should be accompanied by additional measures, including masking, hand washing, physical distancing, and other public health interventions, in the face of increased risk of infection due to the Delta variant.' Fauci was nicknamed 'Flip-Flop Fauci' for U-turns

including telling Americans not to worry about wearing masks at the start of the pandemic, before becoming one of the biggest cheerleaders for the face-coverings.

https://www.dailymail.co.uk/sciencetech/article-10092551/Snakes-experienced-sudden-burst-evolution-dinosaurs-wiped-out.html

KILLING OFF THE DINOSAURS: HOW A CITY-SIZED ASTEROID WIPED OUT 75 PER CENT OF ALL ANIMAL AND PLANT SPECIES. Around 66 million years ago non-avian dinosaurs were wiped out and more than half the world's species were obliterated. This mass extinction paved the way for the rise of mammals and the appearance of humans. The Chicxulub asteroid is often cited as a potential cause of the Cretaceous-Paleogene extinction event. The asteroid slammed into a shallow sea in what is now the Gulf of Mexico. The collision released a huge dust and soot cloud that triggered global climate change, wiping out 75 per cent of all animal and plant species. Researchers claim that the soot necessary for such a global catastrophe could only have come from a direct impact on rocks in shallow water around Mexico, which are especially rich in hydrocarbons. Within 10 hours of the impact, a massive tsunami waved ripped through the Gulf coast, experts believe. This caused earthquakes and landslides in areas as far as Argentina. While investigating the event researchers found small particles of rock and other debris that was shot into the air when the asteroid crashed. Called spherules, these small particles covered the planet with a thick layer of soot. Experts explain that losing the light from the sun caused a complete collapse in the aquatic system. This is because the phytoplankton base of almost all aquatic food chains would have been eliminated. It's believed that the more than 180 million years of evolution that brought the world to the Cretaceous point was destroyed in less than the lifetime of a Tyrannosaurus rex, which is about 20 to 30 years.

https://www.dailymail.co.uk/sciencetech/article-10092551/Snakes-experienced-sudden-burst-evolution-dinosaurs-wiped-out.html

It is well known that the demise of the dinosaurs led to a remarkable diversification of mammals and birds on Earth 66 million years ago. But a new study has found that snakes also experienced a similarly spectacular burst of evolution, expanding their diets from insects and lizards to include the newly-available fish, birds and small mammals. This rapid change led to the nearly 4,000 species we see today, according to researchers from the University of California and University of Michigan. To better understand how this evolution happened, experts studied the diets of 882 living snake species and used mathematical models to reconstruct how the eating habits of their ancestors changed and diversified after a giant asteroid hit Earth. They found that the most recent common ancestor of living snakes was insectivorous — consuming only insects and worms — but after the Cretaceous-Paleogene extinction event, snake diets rapidly expanded to include vertebrate groups that were also flourishing in the wake of the dinosaurs' extinction. Researchers said similar outbursts of dietary diversification were also seen when snakes arrived in new places, including when they colonised the 'New World'. 'What this suggests is that snakes are taking advantage of

opportunities in ecosystems,' said co-author Daniel Rabosky, of the University of Michigan. Grundler and Rabosky merged their dietary dataset with previously published snake phylogenetic data in a new mathematical model that allowed them to infer what long-extinct snake species were like.

https://www.dailymail.co.uk/sciencetech/article-10115761/Early-dinosaurs-SOCIABLE-moved-herds-193-million-years-ago.html

Early dinosaurs were sociable and moved in herds 193 million years ago - 40 million years earlier than first thought, a new study has revealed. More than 100 eggs, complete with embryo remains still inside, have been dug up at a dinosaur graveyard in the Laguna Colorada Formation in Patagonia, Argentina, providing the world's first evidence of herd behaviour. Scans show they belong to the same species - a primitive long necked herbivore called Mussaurus patagonicus, according to the team of palaeontologists from the Massachusets Institute of Technology. The shells, with embryos inside, date back 193 million years to the Mesozoic Era, about 40 million years earlier than previous estimates of the start of herd behaviour. Fossilised bones of 80 juveniles and adults were also dug up, grouped by age across an area of about half a square mile on the dry margins of a lake. Eggs and hatchlings were in one area, adolescents nearby and grown ups scattered throughout - typical of a complex, social structure, the team said. The dinosaurs worked as a community, laying their eggs in a common nesting ground, according to study co-author Dr Jahandar Ramezani. Youngsters congregated in 'schools,' while adults roamed and foraged for the herd. 'This may mean the young were not following their parents in a small family structure,' said Dr Ramezani. 'There's a larger community structure, where adults shared and took part in raising the whole community.' The eggs are about the size of a chicken's egg, and using state of the art X-ray imaging, the team were able to examine the contents without breaking them apart.

Статьи для письменного перевода:

https://mars.nasa.gov/all-about-mars/facts/

Mars is the fourth planet from the Sun and the second-smallest planet in the Solar System after Mercury. The Phoenix lander returned data showing Martian soil to be slightly alkaline and containing elements such as magnesium, sodium, potassium and chlorine. These nutrients are found in soils on Earth, and they are necessary for growth of plants. Experiments performed by the lander showed that the Martian soil has a basic pH of 7.7, and contains 0.6% of the salt perchlorate. This is a very high concentration and makes the Martian soil toxic. Streaks are common across Mars and new ones appear frequently on steep slopes of craters, troughs, and valleys. The streaks are dark at first and get lighter with age. The streaks can start in a tiny area, then spread out for hundreds of meters. They have been seen to follow the edges of boulders and other obstacles in their path. The commonly accepted theories include that they are dark underlying layers of soil revealed after avalanches of bright dust or dust devils. Several other explanations have been put forward, including those that involve water or even the growth of organisms. Liquid water cannot exist on the surface of Mars due to low atmospheric pressure, which is less than 1% of the Earth's, except at the lowest elevations for short periods. The two

polar ice caps appear to be made largely of water. The volume of water ice in the south polar ice cap, if melted, would be sufficient to cover the entire planetary surface to a depth of 11 meters (36 ft). In November 2016, NASA reported finding a large amount of underground ice in the Utopia Planitia region of Mars. The volume of water detected has been estimated to be equivalent to the volume of water in Lake Superior. There are ongoing investigations assessing the past habitability potential of Mars, as well as the possibility of extant life. Future astrobiology missions are planned, including the Perseverance and Rosalind Franklin rovers. Further evidence that liquid water once existed on the surface of Mars comes from the detection of specific minerals such as hematite and goethite, both of which sometimes form in the presence of water. In 2004, Opportunity detected the mineral jarosite. This forms only in the presence of acidic water, which demonstrates that water once existed on Mars. More recent evidence for liquid water comes from the finding of the mineral gypsum on the surface by NASA's Mars rover Opportunity in December 2011. It is estimated that the amount of water in the upper mantle of Mars, represented by hydroxyl ions contained within the minerals of Mars's geology, is equal to or greater than that of Earth at 50–300 parts per million of water, which is enough to cover the entire planet to a depth of 200–1,000 m. In 2005, radar data revealed the presence of large quantities of water ice at the poles and at mid-latitudes. The Mars rover Spirit sampled chemical compounds containing water molecules in March 2007. The Phoenix lander directly sampled water ice in shallow Martian soil on July 31, 2008. On March 18, 2013, NASA reported evidence from instruments on the Curiosity rover of mineral hydration, likely hydrated calcium sulfate, in several rock samples including the broken fragments of "Tintina" rock and "Sutton Inlier" rock as well as in veins and nodules in other rocks like "Knorr" rock and "Wernicke" rock. Analysis using the rover's DAN instrument provided evidence of subsurface water, amounting to as much as 4% water content, down to a depth of 60 cm (24 in), during the rover's traverse from the Bradbury Landing site to the Yellowknife Bay area in the Glenelg terrain. In September 2015, NASA announced that they had found conclusive evidence of hydrated brine flows on recurring slope lineae, based on spectrometer readings of the darkened areas of slopes. These observations provided confirmation of earlier hypotheses based on timing of formation and their rate of growth, that these dark streaks resulted from water flowing in the very shallow subsurface. The streaks contain hydrated salts, perchlorates, which have water molecules in their crystal structure. The streaks flow downhill in Martian summer, when the temperature is above −23 degrees Celsius, and freeze at lower temperatures.

https://www.english-online.at/science/milky-way/galaxy-milky-way.htm

The Milky Way is a large band of stars, dust and gas that make up our galaxy. It contains billions of stars. Our sun and the solar system is only one of them. The Milky Way is only one of billions of galaxies that make up our universe. It has a diameter of about 100,000 light years and is as old as the universe itself. The name probably refers to how we see our galaxy - a white blurry band that looks like spilled milk. The Milky Way has the shape of a thin disk with six spiral arms coming out of a bulge in the center . This bulge consists of a cluster of large stars, gas and dust as well as a strong magnetic field. The whole galaxy rotates around this inner bar of stars. New stars are constantly formed around the spiral arms. Most of the stars in our galaxy are red dwarfs, cold stars that are much smaller than our sun. The galaxy gets flatter towards the edges. The

center of the Milky Way consists of a black hole; an invisible object that has such a strong gravitational pull that not even light cannot escape. The galaxy is surrounded by a gigantic halo made up of old stars and gas that stretches hundreds of thousands of light years into the universe. Our solar system is located on the inner edge of one of the spiral arms, about 30,000 light years from the centre. It completes one orbit around the centre about every 240 million years. The Solar System is located at a radius of about 27,000 light-years from the Galactic Center, on the inner edge of the Orion Arm, one of the spiral-shaped concentrations of gas and dust. The stars in the innermost 10,000 light-years form a bulge and one or more bars that radiate from the bulge. The galactic center is an intense radio source known as Sagittarius A*, a supermassive black hole of 4.100 (± 0.034) million solar masses. Astronomer Edwin Hubble was the first to find out that the Milky Way is only one of many galaxies in our universe. The nearest is Andromeda, which is often referred to as our sister galaxy. It is estimated that in about 4 billion years the Milky Way and Andromeda will collide. The Milky Way is a barred spiral galaxy with a visible diameter between 150,000 and 200,000 light-years (ly). It is estimated to contain 100–400 billion stars and more than 100 billion planets. The dark matter halo around the Milky Way may span as much as 2 million light years. Stars and gases at a wide range of distances from the Galactic Center orbit at approximately 220 kilometers per second. The constant rotation speed contradicts the laws of Keplerian dynamics and suggests that much (about 90%) of the mass of the Milky Way is invisible to telescopes, neither emitting nor absorbing electromagnetic radiation. This conjectural mass has been termed "dark matter".[33] The rotational period is about 240 million years at the radius of the Sun. The Milky Way as a whole is moving at a velocity of approximately 600 km per second with respect to extragalactic frames of reference. The oldest stars in the Milky Way are nearly as old as the Universe itself and thus probably formed shortly after the Dark Ages of the Big Bang. The Milky Way has several satellite galaxies and is part of the Local Group of galaxies, which form part of the Virgo Supercluster, which is itself a component of the Laniakea Supercluster.

https://unbelievable-facts.com/2017/08/mysterious-unexplained-events.html

1. In 1977, SETI researchers detected an unusual radio signal lasting 72 seconds that came from a vacant area in constellation Sagittarius. Astronomers have looked for the same signal but it was never detected again. In 1973, Ohio State University assigned the now-defunct “Big Ear” telescope to the scientific search for extraterrestrial intelligence (SETI). On August 15, 1977, the telescope received a strong narrowband radio signal which lasted for the full 72-second window. The signal appeared to come from the constellation Sagittarius. The anomaly in the signal was detected a few days later by astronomer Jerry R. Ehman while he was reviewing the recorded data. Ehman spotted a series of values of signal intensity and frequency that left him and his colleagues astonished. He was so impressed by the result that he circled the alphanumeric sequence, “6EQUJ5,” on the computer printout and wrote the comment: “Wow!” on its side, leading to the event’s widely used name. Despite several subsequent attempts by Ehman and others, the signal has not been detected since 1977. Many hypotheses have been presented as to the origin of the signal, including natural and man-made sources, although none of them adequately explains the result. The “Wow!” signal may have been an alien radio transmission.

2. In 1967 a huge flying object seen over the harbor in Nova Scotia where it hovered for a while and then "crashed" into the water. The object was never identified even though two local residents reported a floating object in the waters of Shag Harbor. On the night of October 4, 1967, at about 11:20 p.m., at least eleven people saw a low-flying, lit object heading towards Shag Harbor, a tiny fishing village in the Canadian province of Nova Scotia. Multiple witnesses reported hearing a whistling sound "like a bomb," then a "whoosh," and finally a loud bang indicating that something had crashed into the waters of the Harbor. The initial report was made by local resident Laurie Wickens and four of his friends. Driving through Shag Harbor, on Highway 3, they spotted a large object descending into the waters off the harbor. Assuming an aircraft had crashed, Wickens contacted the RCMP detachment in Barrington Passage. Within 15 minutes, ten RCMP officers arrived at the scene. But before any attempt at rescue could be made, the object started to sink and disappeared from view. Within half an hour of the crash, local fishing boats went out for a rescue mission but could find no survivors, bodies or debris. The next day it was determined that no aircraft were missing. When the Royal Canadian Air Force was informed of the crash, they labeled it as a "UFO Report."

3. In 1561, a mass sighting of a celestial phenomenon was reported over Nuremberg, Germany. It was said that there was a great space battle and even a crash landing outside the town. Around dawn on April 14, 1561, residents of Nuremberg saw a strange event in the sky. According to witnesses, there were hundreds of spheres, cylinders, and other oddly-shaped objects that moved erratically overhead. People described it as an aerial battle. It was followed by the appearance of a large, black, triangular object and then a large crash outside of the city. A broadsheet news article was printed later that month, describing the event. According to the news article, at first there appeared in the middle of the sun two blood-red, semi-circular arcs. Many globe-like structures and few rod-like structures also appeared. They started to fight among themselves for an hour. After that, they began falling down on earth "as if they all burned." The phenomenon has been interpreted by some modern UFO enthusiasts as an aerial battle, possibly of extraterrestrial origin. Most skeptics have dismissed the phenomenon claiming it to be a "sun dog."

4. 10. In 1917 near Fátima, Portugal, a crowd of people gathered and watched the skies as a multicolored Sun appeared to"dance" without being blinded from their eyes' direct focus on it. In the spring of 1917, three Catholic shepherd children living near Fatima, Portugal, reported apparitions of an Angel and a prophecy. According to the prophecy, prayer would lead to an end to the Great War, and on October 13th of that year, the Lady (Angel) would reveal her identity and perform a miracle "so that all may believe." The news of the prophecy quickly spread and many pilgrims started visiting the area. On 13 October 1917, a large crowd had gathered near Fátima, Portugal. According to many witnesses, after a period of rain, the dark clouds broke and the sun appeared as an opaque, spinning, disc in the sky. It was said to be significantly duller than normal and was casting multicolored lights across the landscape, the people, and the surrounding clouds. The sun was then reported to have careened towards the earth before zig-zagging back to its normal position. Not all witnesses reported seeing the sun "dance." Some people only saw the radiant colors, and others, including some believers, saw nothing at all. The only known picture of the sun taken during the event doesn't show anything unusual. The claim of the "Miracle of the Sun" has received many criticisms from theologians, scientists, and skeptics. Some believe that it is a product of psychological factors such as the power of

suggestion. While according to others, it may have been a combination of optical effects and some meteorological phenomena. The reality of the event is still a mystery.

5. In 1994, Oakville, WA experienced a rainstorm in which gelatinous blobs fell onto a farm. The blobs were examined and found to contain human white blood cells, but they did not contain nuclei, which is something human white cells do have. On August 7, 1994, during a rainstorm, blobs of a translucent gelatinous substance fell at the farmhouse of Sunny Barclift in Oakville, WA. Each blob was about half the size of a grain of rice. Shortly afterward, Barclift's mother Dotty Hearn suffered from dizziness and nausea and was rushed to the hospital. Barclift and one of his friend too began suffering from bouts of fatigue and nausea after handling the blobs. Even Barclift's kitten died after contact with the blobs. Later it was reported that the maladies of Barclift's mother may have been due to an inner ear condition and not due to the blobs. In order to identify the blobs, Barclift contacted his mother's doctor, Dr. David Litle. Dr. Litle ran some tests at the hospital and reported that the blobs contained human white blood cells. When the blobs were examined by Washington State Department of Ecology's hazardous materials spill response unit, they found that the blobs contained cells that lacked nuclei. But human white blood cells contain nuclei, so they were not a byproduct of a human body. Many theories have been presented to explain the appearance of the blobs, but none of them have proved to be correct.

6. On 30 July 1915, after the U-28 sunk the British steamer Iberian, an explosion occurred in which, along with the debris, a creature resembling a gigantic crocodile was seen, which quickly disappeared from sight. SM U-28 was a Type U 27 U-boat that served in the First World War. It was commissioned into the Imperial German Navy on 26 June 1914, with Freiherr Georg-Günther von Forstner in command. On 30 July 1915, Freiherr von Forstner reported a mysterious event after the U-28 sunk the British steamer Iberian. According to the commander: "The wreckage remained beneath the water for approximately twenty-five seconds, at a depth that was clearly impossible to assess, when suddenly there was a violent explosion which shot pieces of debris — among them a gigantic aquatic animal — out of the water to a height of approximately 80 feet." This creature was witnessed by the commander, the chief engineer, the navigator, and the helmsman. The commander reported that he couldn't identify the creature, but he said that it resembled a crocodile. It was about 60 feet long, with four limbs resembling large webbed feet, a long, pointed tail, and a head which also tapered to a point. No photograph of the creature was taken as the animal sank out of sight after ten or fifteen seconds.

7. A small crater lake in Africa killed 1,700 villagers and 3,500 livestock overnight when it suddenly released 300,000 tons of carbon dioxide suffocating everything within 16 miles. Scientists still don't know what triggered the event. On 21 August 1986, Lake Nyos in northwestern Cameroon suddenly erupted producing about 100,000–300,000 tons of carbon dioxide. Soon, a large cloud of carbon dioxide formed, rose at nearly 100 kilometers per hour, and spilled over the northern lip of the lake. It descended down two valleys, displacing all the air and suffocating people and livestock within 25 kilometers of the lake. This disaster killed 1,746 people and 3,500 livestock. Even now, the reason of this catastrophic out-gassing has not been discovered. According to geologists, the reason might have been a landslide, a small volcanic eruption on the bed of the lake, or a small earthquake. Despite all the theories, no real reason had been found up to now.

https://www.pewresearch.org/global/2020/04/21/u-s-views-of-china-increasingly-negative-amid-coronavirus-outbreak/

U.S. Views of China Increasingly Negative Amid Coronavirus Outbreak

About Pew Research Center's March 3-29, 2020 Survey. Sample size: 1,000. Margin of error: ±3.7 percentage points. Representative: Adult population 18 plus. Results for the survey are based on telephone interviews conducted under the direction of Abt Associates. The results are based on a national sample. More details about our international survey methodology and country-specific sample designs: List-assisted Random Digit Dial (RDD) probability sample of landline households (20% of sample) and list-assisted RDD frame of cell phone numbers (80% of sample). Landline and mobile samples are stratified by Census Division. Individuals within landline households are selected using the youngest male or female method among those currently at home. Interviews in the cell sample conducted with the person who answered the phone, if age 18 or older. For both landline and cell samples, up to seven phone calls are made to complete the interview with the selected respondent, with up to three additional calls for Spanish-language respondents. Pew Research Center undertakes all polling activity, including calls to mobile telephone numbers, in compliance with the Telephone Consumer Protection Act and other applicable laws.

Republicans more negative than Democrats toward China, though unfavorable ratings have climbed among both parties. Since President Donald Trump took office in 2017, his approach to U.S.-China relations has included increased pressure via tariffs and trade war rhetoric, and now, with the onset of an unprecedented pandemic, the stage has been set for both sides to cast aspersions on the other. Against this backdrop, negative views of China have continued to grow, according to a new Pew Research Center survey of Americans conducted in March 2020. Roughly two-thirds now say they have an unfavorable view of China, the most negative rating for the country since the Center began asking the question in 2005, and up nearly 20 percentage points since the start of the Trump administration. Positive views of China's leader, President Xi Jinping, are also at historically low levels. Economic factors, such as job losses to China and the trade deficit, remain key concerns for the American public. But other issues – including Chinese human rights policies and environmental degradation – also worry Americans. Many of these issues play a role in how the public views China more broadly: Those who see the China-related topics included in the study as a serious problem generally have less favorable views of China overall. As the economies of both China and the United States struggle with the impact of the current pandemic, more Americans now see the U.S. as the world's leading economic power than at any time over the past 12 years. In fact, Americans now see the U.S. as more of an economic powerhouse than China by roughly two-to-one (59% vs. 30%). Americans also overwhelmingly believe their country leads the world militarily and that the world is better off with U.S. leadership as opposed to that of China. In some ways, this is a partisan story. Republicans continue to be more wary of China than Democrats across many questions in this report. Nearly three-quarters of Republicans and Republican-leaning independents see China unfavorably, compared with roughly six-in-ten Democrats and Democratic leaners. They are also more worried about China when it comes to cybersecurity and economic issues such as job

losses to China and the trade imbalance. Republicans are more likely than Democrats to see the United States outpacing China as the world's leading economic power as well as the world's top military. And GOP supporters almost universally say it is better that the world be led by the U.S. Still, negative views of China increased slightly among Democrats this year, so partisans of both stripes are now largely negative toward the superpower. In fact, after seeing large increases in negative views of China from 2018 to 2019, both parties registered their most unfavorable opinions to date in 2020. These are among the findings of a new survey by Pew Research Center, conducted March 3 to 29, 2020, among 1,000 adults in the U.S. The survey also finds that younger people, who have historically been more positive than older Americans toward China, now increasingly hold negative views of the country and are more prone to see it as a threat to the U.S. than in previous years. Older Americans, however, still take a more negative stance than their younger compatriots on most aspects of the U.S.-China relationship. Unfavorable views of China continue to climb. Views of China have soured further in 2020, building on the dramatic uptick in negativity seen between 2018 and 2019. Roughly two-thirds of Americans now have a negative opinion of China, the highest percentage recorded since Pew Research Center began asking the question in 2005. Only about a quarter in the U.S. report a favorable attitude. The survey took place as the coronavirus outbreak spread throughout the U.S., with several states implementing lockdowns and death tolls multiplying at a rapid clip. While China's handling of the virus may have made an impression on some Americans, it does not appear that escalating conditions in the U.S. over the course of March shifted attitudes toward China *during that period*. Views of China did not significantly change when comparing those surveyed before and after March 12, approximately when the NBA indefinitely postponed the remainder of the season and actor Tom Hanks announced testing positive for COVID-19 on social media. Americans interviewed prior to March 13, when the U.S. government declared a national emergency, had equally negative views toward China as those interviewed on or after that date, even when holding constant age, education, gender and political affiliation. Across demographic groups, negative views of China abound. Roughly six-in-ten Democrats and Democratic-leaning independents have unfavorable views of China, as do roughly seven-in-ten Republicans and Republican-leaning independents. Those with a college degree are just as likely as those with less than a college degree to hold negative views of China; roughly two-thirds of each group voice this opinion. A chart showing that older Americans increasingly negative on China. Older Americans, those ages 50 and older, are more likely than those ages 18 to 29 to have unfavorable views of China. This has been the case every year since the Center first asked the question 15 years ago. But while half or more of those 50 and older have held negative views of China since 2012, this is the first year in which more than half of younger Americans also have an unfavorable opinion. Among this age group, negative views have roughly doubled since the question was first asked. Largely similar patterns emerge by party, with Republicans tending to be more negative than Democrats. Still, both partisan groups – for the second year in a row – have recorded their most negative assessments of China since the Center began asking this question in 2005. Views of President Xi reach new low in U.S. As ratings for China have declined, so too has confidence in Chinese President Xi Jinping. Roughly seven-in-ten Americans (71%) say they do not have confidence in Xi to do the right thing when it comes to world affairs – a high since the Center first asked the question. Just 22% say they have faith in the Chinese leader, down 15 percentage points since last year. The drop in confidence from 2019 to 2020 is especially notable. While views of Xi have been fairly stable for the past few years,

remaining within a 10 percentage point range, in just the last year the percentage saying they lack confidence in him has increased by 21 points. This shift occurred among both Republicans and Democrats, as well as among older and younger Americans. And while the U.S. president's rhetoric toward China's leadership during the outbreak has fluctuated in tone, the American public's attitudes remained fairly stable over the course of this survey. As with views of China, a shifting news environment over the course of March with regard to the role Beijing played in handling the initial outbreak does not appear to have affected how Americans view President Xi in the short term. Those interviewed prior to the U.S. government declaring a national emergency on March 13 were just as likely as those interviewed later in March to lack confidence in the Chinese leader. This remains true even when holding constant factors including age, gender, education and political affiliation. Many see Chinese power and influence as threat to the U.S. About nine-in-ten U.S. adults see China's power and influence as a threat – including 62% who say it is a major threat. While the total portion that sees China's power and influence as a threat has not changed significantly since the question was last asked in 2018, the share perceiving China as a major threat has increased 14 percentage points since 2018. Older Americans are more concerned than younger adults about China. Nearly seven-in-ten of those ages 50 and older see China's power and influence as a major threat, compared with roughly half of those 18 to 29. Americans were also asked if they consider the condition of the global economy a major threat, minor threat, or not a threat to the U.S. Those who see global economic conditions as a major threat are 15 percentage points more likely to see China's power and influence as a significant threat than those who feel less threatened by the global economic situation (71% vs. 56%). Americans most concerned about China's environmental impact and cyberattacks. When asked whether various issues involving China pose a problem for the U.S., at least two-thirds of Americans say each is a serious concern for their country – and most issues are seen as very serious problems by roughly half or more. Topping the list is China's impact on the global environment. A majority (61%) says China's environmental footprint is a very serious problem for the U.S., a 10 percentage point increase from when the question was last asked in 2018. (China was recently estimated to emit roughly 30% of the world's total amount of carbon dioxide but produces fewer greenhouse gases per capita than the U.S. does.) Those who see global climate change as a major threat are 28 points more likely than those who do not see global warming as a threat to be very concerned with China's environmental impact. Americans are similarly concerned with cyberattacks from China. A majority of 57% say this poses a very serious problem to the U.S. This is unchanged from 2018 but up 7 percentage points from 2012 when the question was first asked. Similarly, 57% say China's human rights policies pose a very serious problem – an 8-point increase from 2018. Economic and military issues trigger slightly lower, though still high, levels of concern for Americans. The loss of U.S. jobs to China is seen as a very serious problem by 52% of Americans, but this has fallen from 71% who called it a very serious issue in 2012. The U.S. trade deficit with China – which recently shrank for the first time in half a decade – is also considered a very serious problem by about half in the U.S. (49%), a decline of 12 percentage points since 2012. Another 49% say China's growing military power is a substantial concern. As the U.S. keeps its market closed to the Chinese telecommunications giant Huawei and raises alarms about the security of Chinese technology, about half of U.S. adults (47%) are concerned about China's growing technological power. China has also recently overtaken the U.S. as the world's top producer of patent applications. Widespread protests over an extradition bill's potential effects on Hong Kong's judiciary independence erupted across the

special administrative region last year. But tensions between mainland China and Hong Kong are the least concerning to Americans of the issues polled. Only three-in-ten consider this issue a very serious problem for the U.S. Concern about each of these issues generally coincides with less favorable overall views of China. For instance, among those who say China's growing military power is not too serious a problem or not a problem at all, 47% have a favorable view of China. But, among those who believe China's military strength poses a very serious threat to the U.S., just 19% see China favorably. Evaluations of these issues tend to differ based on individuals' concerns about other threats. Those who say the condition of the global economy poses a major threat to the U.S. are more likely to rate most issues in the China-U.S. relationship as very serious problems. For instance, about six-in-ten (58%) of those who see international economic conditions as a major threat are also very concerned about America's trade deficit with China. On the other hand, 39% of those who consider the economy a minor threat are very concerned about the deficit – a 19 percentage point difference. People who are at least somewhat concerned about these issues are also more likely to see China as a major threat than those who do not see the issues as serious problems. For example, when looking at China's growing military power or its growing technological power, those who see either as a serious problem for the U.S. are 46 percentage points more likely to say that China's growing power and influence pose a major threat to the U.S. The difference is smallest when looking at the U.S. trade deficit with China, but even then, those who see the deficit as a serious problem are 23 points more likely to see China as a major threat. Additionally, a partisan gap exists when evaluating certain issues in the Sino-American relationship. Republicans and Republican-leaning independents are more likely than Democrats and Democratic-leaning independents to see the U.S. trade deficit with China, the loss of U.S. jobs to China and China's growing technological capabilities as very serious problems. The same divide exists over China's growing military power and cyberattacks from China. What's more, Republicans have become more concerned about the U.S. trade deficit with China since last polled on the topic in 2018, when the latest U.S.-China trade war began. Concern for the trade deficit among Democrats did not change over that same time. China's environmental impact is the only issue that Democrats are more likely to see as a very serious problem: Concern among Democrats on this issue has increased by 14 percentage points since 2018. Still, both sides of the aisle share the same level of concern for tensions between mainland China and Hong Kong and China's human rights policies. Older Americans are more likely than their younger counterparts to see several of these issues as major problems. Evaluations of China's growing military power evoke the greatest generational divide. While 61% of those ages 50 and older see China's growing military power as a very serious problem, 32% of those ages 18 to 29 say the same – a difference of 29 percentage points. Similar divides accompany opinions on cyberattacks from China (27 points) and China's growing technological prowess (25 points). Notably, similar majorities across all age groups see China's environmental impact as a very serious problem. Majority sees U.S. as leading economy, but perceptions colored by financial views. China's economic growth has slowed in recent quarters, and the U.S. stock market logged one of its worst first quarters in history amid the spread of COVID-19. Even though unemployment surged in the U.S. throughout the March field period, marking the worst period for jobs since the 2008 recession, Americans' sense that the U.S. is the world's top economy has grown precipitously. Today, when asked to choose between the U.S., China, Japan and the countries of the European Union as the world's leading economic power, 59% of Americans choose their own country, up from 50% last year. This is both the largest share to

name the U.S. and the largest year-on-year increase since the question was first asked in 2008. Only three-in-ten name China, and this is largely unchanged over recent years. People's personal economic situations, as well as concerns about both the domestic and global economy, color their sense of how the U.S. economy rates on the world stage. Those who have higher incomes are more likely than those who are less well-off to say the U.S. is the world's leading economic power (63% vs. 53%). The same is true of those who say their country's economic situation is good compared with those who say the opposite (66% vs. 52%). And those who say the condition of the global economy is a major threat to the United States are less likely to see the U.S. as economically superior (and more likely to name China) than those who see it as a minor threat or no threat at all. Those who see China's power and influence as a major threat are also more likely to name China as the world's leading economy than those who see it as less of a threat. Older Americans are more likely than younger Americans to say the U.S. is the leading economic power: 63% of those ages 50 and older name the U.S., while fewer than half (47%) of those ages 18 to 29 do the same. Americans younger than 30 are not only more likely to name China as the world's leading economy than older Americans (38% vs. 26%), but they are also more likely to name the countries of the EU (9% vs. 2%). Partisanship is also related to how Americans evaluate the world's top economic power. While both Republicans and Democrats are more likely to name the U.S. as the world's leading economic power than China, Republicans and Republican-leaning independents are particularly convinced of America's economic superiority. Republicans and those who lean Republican are more than twice as likely to name the U.S. as they are China (66% and 27%, respectively), whereas Democrats and Democratic-leaning independents name the U.S. at a lower rate (54% and 33%, respectively). And, while partisanship also colored views of which economy was strongest last year, this gap is relatively new. Widespread sense that U.S. is militarily dominant, should lead globally. When it comes to which country is the world's leading military power, more than eight-in-ten Americans agree that it's the U.S., up 11 percentage points since the question was last asked in 2016. Only 6% name China, a 6-point decrease. Similarly, few name Russia (8%), a view largely unchanged since four years ago. In 2016, Republicans and Democrats were equally likely to see the U.S. as the top military power but they differed with regard to Russia. Then, Republicans were more likely to name Russia as the top military power (14%) than Democrats (6%). A chart showing most say that the U.S. is and should be the world leader. Republicans and Republican-leaning independents are more likely to name the U.S. as the leading military power than Democrats and Democratic leaners (90% vs. 80%). While Democrats are about as likely as Republicans to name China, they are somewhat more likely to name Russia as the world's leading military power (9% vs. 4%).3 Men, those with higher incomes and those with higher levels of education are more likely to say the U.S. is the leading military power than women, the less affluent or less educated people, respectively, though differences between people of different educational backgrounds are muted. Regardless of whether they think the U.S. is the leading economic or military power today, nearly all Americans also think that a future with U.S. leadership is a better thing than one with Chinese leadership. When forced to choose between which would be better for the world, 91% of Americans say it is better for the U.S. to be the world's leading power than China (4%), largely unchanged since 2018 when the question was last asked. While there is widespread agreement across all groups in society, Republicans and those who see China's power and influence as a major threat are more likely than Democrats and those who feel less threatened to value U.S. global leadership.

Teun A. van Dijk Political discourse and political cognition. URL http://www.discourses.org/mOldArticles/Politica_discourse_and_political_cognition.pdf

Relating politics, cognition and discourse

The aim of this chapter is to explore some of the relations between political discourse and political cognition. Separately, both interdisciplinary fields have recently received increasing attention, but unfortunately the connection between the two has largely been ignored: Political psychology has not shown much interest in discourse, and vice versa, most scholars interested in political discourse disregard the cognitive foundations of such discourse. And yet, the relationships involved are as obvious as they are interesting. The study of political cognition largely deals with the mental representations people share as political actors. Our knowledge and opinions about politicians, parties or presidents are largely acquired, changed or confirmed by various forms of text and talk during our socialization (Merelman 1986), formal education, media usage and conversation. Thus, political information processing often is a form of discourse processing, also because much political action and participation is accomplished by discourse and communication. ……

Discourse processing

Language use in general, and the production and understanding of political text and talk in particular, may cognitively be analyzed in terms of the theoretical framework summarized above (among many studies, see, e.g., Britton and Graesser 1996; van Dijk and Kintsch 1983; van Oostendorp and Zwaan 1994; Weaver, Mannes and Fletcher 1995). Relevant for our discussion are (a) the relations between shared beliefs (political representations) on the one hand and personal beliefs (models), on the other hand; and (b) the relations of these social and personal representations with discourse structuresIn discourse production, we assume that speakers (or writers) will generally start from their personal mental model of an event or situation. This model organizes the subjective beliefs of the speaker about such a situation. Thus, in our example, the speech of Sir John is produced on the basis of his model of the current ethnic and immigration situation in England, a model that is evaluatively defined in terms of a macro-proposition that he also expresses: 'A problem for England' (line 4). Part of his broader model about the current ethnic situation in the UK, there are more specific models of particular events, such as about the 'dangerous eruptions from parts of the Muslim community' and about the letter sent by Secretary Hurd to that community, both of which not only feature Sir John's interpretation of these actions, but also his opinions. Sir John's models instantiate shared social and political beliefs, viz., those of all English people, in general, and those of the conservatives in particular. For instance, it is common knowledge that several hundreds of thousands of immigrants have come to England, and this general knowledge is here integrated into the model of the current situation. Similarly, as he claims himself, not only he but many others define such immigration as a 'problem'. And like others he specifically instantiates the racist attitude that (many) Muslims are `dangerous'. Conversely, he represents 'us in England' as gentle, kind, tolerant, peace-loving people. This contrast between Us and Them thus not only characterizes the attitudes and ideologies he shares with other (mostly conservative, white) British people, but also polarizes the current personal model he has about the present situation in Britain. These examples show some of the relationships between personal knowledge and opinions, and socially shared ones, that is, between representations in Social Memory and personal models in Episodic

emory. Once such a personal model of an event or situation is constituted, speakers may express fragments of such models in discourse, using a number of detailed linguistic and discursive strategies that will not be analyzed here. It is however important to note that speakers usually only express a small part of their models, viz., only the information that is relevant in the current context. I shall come back to this contextual constraint below. In other words, a text is usually only the tip of the iceberg of all information speakers have about an event or situation they are talking about. Thus, Sir John undoubtedly knows more about the 'dangerous eruptions' of the Muslim community, but only summarizes the model he has of this event, viz., by expressing the evaluative macro-proposition defining his model. The same is true for the expression of his model of Mr. Hurd's letter to the Muslim community. What has here been summarized for the process of discourse production also applies to discourse understanding. Thus, Sir John's audience, as well as we as readers of the Hansard text of his speech, understand what he says first through a complex process of decoding and understanding words and sentences, and ultimately by constructing our own models of what he is talking about. Of course, if we agree with him, we would accept his models as essentially true or 'correct'. If not, we may construct alternative models of the situation, depending again on our own personal knowledge of the current situation as well as on socially shared, group knowledge and evaluations. If recipients read or listen to many similar discourses of politicians or the mass media, and have no competing, alternative information, such models may in turn be generalized to socially shared, abstract representations about Muslims, minorities, English people and immigration, for instance in ethnic prejudices and nationalist or racist ideologies. This brief characterization of discourse processing shows several relations between political discourse and cognition. Thus, our example shows how conservative political attitudes and ideologies are used in the construction of an individual model of the current situation, and how some of this model information is selectively expressed in a parliamentary speech. Important for our argument is that this theoretical framework indeed offers the first elements of the necessary interface between the social and the individual, between group action and individual action and discourse. That is, at the socio-political level of analysis, we witness how the Tories enact or defend a restrictive immigration bill and how such a political act of a group is actually 'realized' locally and contextually by a member (of parliament, of the Conservative Party) through a specific form of interaction, viz., a parliamentary speech. Similarly, and in parallel with the social-political conturn understand and evaluate us as a participant, and so on. For these and other reasons, language users multiply signal or 'index' their text and talk with elements of the context, as Sir John does with his question: 'Why are we English Members of Parliament here today?'. This question alone indexes the aim of the current session of parliament, the participants and their roles (MPs), as well as the Setting (location and time). This way of formulating the relations between text and context is the standard one. It does however have a serious theoretical shortcoming, because it relates two types of entities that cannot simply be related in a direct way, viz., structures of a social situation (participants, settings, actions) and structures of discourse. Moreover, if such would be the case, all people in such a social situation would speak in the same way. That is, we again need a (cognitive) interface. Indeed, it is not so much the social situation that makes Sir John speak as he does, but rather his personal interpretation or model of that situation What discourses signal or index, thus, is not the social context itself, but the subjective mental models of the context as constructed by speech participants (for details, see van Dijk 1997a 1999). This allows personal differences be tween context models of different participants, and (different) personal opinions

about the current communicative situation (including about ourselves and others in it). Context models also explain conflicts between speech participants because they have (and use) incompatible models of the current communicative situation. And perhaps most importantly, such personal models of the situation explain why all individual text and talk, even about the same topics, is always unique and different, while based on unique personal models of both the event and context. It follows that in the overall framework presented above, a crucial component was still missing between event models and discourse, viz., the context models of the participants in a communicative event. It is the (subjective) information stored in these models that ultimately controls how speakers and writers adapt their text and talk to the current situation, and how speech acts and conversational acts may be (more or less) appropriate in such a situation. Finally, context models also define the very notion of (pragmatic) relevance (Sperber and Wilson 1986), namely in terms of those structures of the communicative situation that are constructed as context by the participants in their context models. Context models are structured like any other model represented in episodic memory. More specifically, contexts feature such categories as a Setting (Time, Location, Circumstances, Props), Events, Participants and their various types of social, professional, communicative roles, the Actions they currently engage in, as well as current Cognition (aims, knowledge, opinions, emotions, etc.). At a fairly high level, they may feature an overall definition of the whole situation, which ultimately may be represented as constitutive of a specific social domain. (For earlier work on the structure of social situations and episodes, see e.g., Argyle, Furnham, and Graham 1981). Thus, for our example we may assume that the MPs present in the parliamentary debate about immigration share information about the current domain (Politics rather than, say, Education), the current definition of the situation (Session of Parliament), the Setting (House of Commons, July 5, 1989), the Circumstances (a Bill presented by the cabinet), the various participants and their roles as MPs, representatives of their constituencies, the ongoing overall interaction or genre (a parliamentary debate), and a vast set of shared knowledge about the current issue (immigration, minorities, Muslims,
England, etc.). There are also elements where the models of the participants differ, more generally, and at any respective moment of the ongoing debate, in particular. Thus, obviously, there are differences of opinion, e.g., between the Tories and Labour, and possibly among Tory MPs as well (Sir John is notably more reactionary in his views than many other conservatives). Similarly, when speaking, Sir John has a different role and aim than the other participants, who have the role of listeners. These will in turn gradually confirm or change their opinion about what is being said, as well as about Sir John. Most crucially different and possibly changing during a discourse, are the mutual perceptions of participants, that is the mental models they construct about each other (for perceptions and representations of politicians, see Granberg 1993; Lodge and McGraw 1995). Similarly, the participants in this situation may have different emotions. Sir John may express fears of threatening overpopulation or Muslim violence, while at least some people in his audience may be angry about his racist remarks. More generally, emotion is an important factor in political context models (Roseman, Abelson and Ewing 1986). Such a property of the context model will control specific properties (e.g., intonation, stress or lexicalization) of political discourse (Just, Crigler, and Neuman 1996). Changing for all, dynamically, is also what has already been said at each moment, that is, the preceding discourse. This confirms the intuitive idea of reflexivity, viz., that the discourse is of course part of its own context. In other words, some elements of a context model are shared by all participants, and

some are different; some are stable throughout the whole communicative event, whereas others dynamically change as a function of the ongoing interaction and discourse. In other words, context models, especially in verbal interaction, are dynamic, and gradually change. Whereas mental models of events may be seen as the basis of the 'content' or meaning of discourse, context models typically control not only what is being said, but especially how it is said. That is, they may be seen as the basis of the pragmatic and stylistic properties of discourse. The structures of context models define the appropriateness conditions of speech acts and interaction sequences more generally. They serve as the referential basis of deictic expressions. They control what 'relevant' information of event models is included in the semantic representation of a text. And they regulate how such meanings are variably formulated in syntactic structures, lexical items, and phonological or graphical expressions. In sum, context models are vital for the production and comprehension of a large number of discourse structures, and prove how important the social situation and its interpretation are for discourse and communication. Context models are particularly relevant for an explicit analysis of political discourse genres. Indeed, few structural properties of political discourse genres (as we shall see in more detail below) are exclusive, but may be shared with other types of discourse. However, what is specific are the elements of the context of political text and talk, viz., the overall domain and definition of the situation, the setting, circumstances, participant roles, aims, opinions and emotions. In other words, the genre definition of political discourse may well be contextual rather than textual. Except from a few expressions explicitly denoting elements of the current situation, much of what Sir John says about immigration and minorities could be said in other social situations. Conversely, other genres, such as conversations, stories, poems, news reports advertisements and scholarly articles are much more defined in terms of their specific structures, and not largely by their context. Thus, we may provisionally conclude that political discourse genres are essentially defined by their functions in the political process, as represented by the categories of the political context model. Trivially: Whatever a politician says is thus by definition a form of political discourse; and whatever anybody says with a political aim (viz., to influence the political process, e.g. decision making, policies) is also a form of political discourse. The cognitive processes involved in the construction, activation, uses or changes of both event models and context models are strategic (van Dijk and Kintsch 1983). That is, they are on-line, goal-oriented, hypothetical operations that process information at various levels at the same time. These strategies are fast and efficient, but fallible, and may need correction on later occasions: Language users may be wrong about the interpretation of a social situation - and such errors may lead to typical communicative conflicts, for instance when a recipient interprets a promise as a threat, tells many things a recipient already knows, uses an inappropriate style, or the wrong politeness markers. There are various types of 'pragmatic' repairs that may correct such misunderstandings of context information. The efficiency of strategic processing may require that often only part of the relevant situational information needs to be processed. Depending on aims, tasks or special requirements, thus, language users may interpret a communicative situation more or less superficially, resulting in more or less detailed context models. In some situations, only the most important top levels of context models need to be constructed, such as the overall definition of the situation, the overall ongoing actions, only a few participants and their most relevant role, and an approximate sub-model of the knowledge and opinions of the recipient(s). In our example, for instance, more casual or distracted recipients of Sir John's speech may only have to know that this is a speech within a parliamentary debate, and that the

speaker is a conservative MP. Detailed beliefs about the various roles of Sir John (for instance the district he represents) or his knowledge may not be necessary to arrive at a contextually more or less appropriate understanding of his discourse. Indeed, some may only represent Sir John in terms of his age or appearance, or his `image', instead of his political opinions (see Wyer, et al. 1991). Obviously, those appointed to criticize or comment upon his speech, may need a much more detailed mental model of this situation, including of Sir John himself.

Political cognition

After this discussion of the personal side of political cognition, that is, the models political actors construct in their episodic memory in order to produce or understand political discourse and action, we finally need to say some more about the socially shared dimension of political cognition. We have assumed that social memory is constituted by knowledge, attitudes, ideologies, values and norms. We have further assumed that at least some of these representations may be schematically organized, and how they are organized in the overall architecture of the social mind (Kuklinski, Luskin and Bolland 1991; see the various contributions in Lau and Sears 1986). However, in order to understand the structures of political discourse, we also need to say more about the structures of general political representations. How, indeed, are political attitudes and ideologies represented, and what is the role of political values and norms in such representations? Also, we may want to know how such structures affect the content and structures of both event models and context models, and how finally they may appear in political discourse. Thus, Sir John claims that the birthrate of immigrants far exceeds that of the indigenous population, a general statement that might be a direct expression of his conservative ethnic attitudes about groups and their reproduction, although he claims (`as we all know') that this proposition is part of the general Common Ground. At the same time, he explicitly claims that he has a great admiration for many Muslims, but since little admiration for Muslims transpires in his speech, we may wonder whether his underlying attitudes about Muslims really are suffused by admiration, or whether this claim is essentially a strategic form of impression management and positive self-presentation, engaged in to disclaim possible prejudice or racism his audience might attribute to him. In other words, the relations between political representations and discourse are not that straightforward. So let us briefly examine some of the components of social-political memory.

Knowledge

Unlike most philosophical and psychological approaches to knowledge, I proposed above to distinguish between two types of knowledge, namely the knowledge shared by a specific group, on the one hand, and the general cultural knowledge shared, across different groups, throughout society, on the other. The latter, Common Ground knowledge is the basis of all interaction and communication in society and is generally presupposed in discourse. This kind of knowledge is generally undisputed, uncontroversial and taken for granted, and taught in socialization and at school in a given society. These generally shared 'factual' beliefs are accepted as (and called) 'knowledge' in society. In Sir John's speech, most of his words are based on such shared knowledge: Thus, we all know what 'parliament', 'Muslims' or 'immigration' are. Secondly, there are factual beliefs that are only accepted as 'true' by specific social groups, such as scientists, experts, professionals, members of specific religions, members of a party, or any other kind of group. The criteria applying for knowledge mentioned above also apply here (this knowledge is also routinely undisputed, taken for granted, seen as common sense, generally presupposed, etc.),

but only at the group level. This group knowledge is called `knowledge' within the group itself. Outside the group, however, such knowledge may well not be called 'knowledge' at all, but 'belief or 'opinion', that is, beliefs that are not found to be true according to the truth criteria of the general culture, or those of other groups (which does not mean that from an abstract 'universal' point of view such beliefs are false). Much political knowledge is group knowledge and will often be seen as `mere political opinion' by opposing groups. Typically, knowledge of feminists about male dominance in society, may be rejected by many men, and the same is true for the knowledge of environmental groups about pollution, which may be challenged by polluters. The converse is equally true: Also racist groups have their group knowledge, even if many other people in society may dispute such knowledge and treat it as prejudiced beliefs. In Sir John's speech, there is a typical example when he states that 'we all know' that the birthrate (of Muslims) far exceeds that of the indigenous population. We may assume that this is a 'fact' for Sir John, whereas members of other (e.g., anti-racist) groups may qualify this as a prejudiced opinion, or at least as an exaggeration, or as a biased statement because it is incomplete, in the sense that the birth-rate of immigrants, even when higher than that of the native population, usually quickly adapts to that of the majority. The fact that Sir John makes the statement about what 'we all know' suggests that this is precisely not general knowledge, otherwise he would have presupposed and not asserted it. He makes the statement because he knows that others in parliament precisely would see it as an opinion or a biased belief, and his presentation of this knowledge as generally shared, is thus a well-known rhetorical move to persuade the audience of the general validity of his group `knowledge.' The same is true for his 'knowledge' about the 'large numbers' of immigrants Great Britain has absorbed, and that ordinary English people were never asked their opinion about immigration. Socially shared knowledge of specific groups or whole cultures needs to be applicable in many situations and therefore needs to be general and abstract. It may be about immigrants in general, but is not about a specific immigrant or a specific event. We have argued that such specific knowledge is typically stored in mental (event) models in episodic memory. Hence, it makes sense to distinguish not only between cultural and group knowledge, but also between social and personal knowledge. Finally, there is a type of knowledge that embodies characteristics of both specific (model-based) knowledge on the one hand, and socially shared knowledge, on the other hand, namely historical knowledge. Such knowledge may be about specific events, e.g., the Holocaust or the Civil War in Bosnia, but at the same time it may be more or less generally known, and therefore even presupposed (to be true) in discourse and interaction. Much political knowledge is of that kind, and also Sir John's speech presupposes such historical-political knowledge. 3.2 Opinions and attitudes The beliefs described above as various kinds of knowledge may be called `factual' because persons, groups or whole cultures hold them to be true according to their respective truth criteria. There are, however, also sets of belief in social memory that are not dealt with in terms of truth criteria, but shared on the basis of evaluative criteria (good vs. bad, etc.), namely opinions. As we have seen, however, what may be a factual belief of one group, may be an evaluative belief or opinion for another. Just as knowledge, such shared social opinions may be organized in larger structures, for which we reserve the traditional term attitude (for other conceptions of attitudes, see Eagly and Chaiken 1993). Thus, shared group attitudes about abortion or immigration usually consist of more than one opinion. Note that in my framework attitudes are essentially social and associated with groups. Individuals may have personal opinions, but only share (in) attitudes as members of such groups. Because of their evaluative nature, opinions and attitudes are typically

not taken for granted, uncontroversial or undisputed and are therefore seldom part of the cultural Common Ground. Yet each culture may well have a the threat of foreigners in general, and of Muslims in particular, attitudes about what 'ordinary people' think, and more generally about immigration. Finally, note that the text also features a number of opinions that are personal, such as his admiration of Muslims and their religion, and his liking for Douglas Hurd's letter to the Muslim community. However, even such personal opinions, when no further argued for, must be based on presupposed general opinions. Thus his positive remark about Muslims is based on the general opinion and value that other cultures are equal to ours, and his liking of the letter-writing an opinion derived from the conservative group attitude about law and order and the actions responsible politicians should take in order to keep the peace. In other words, opinions in personal mental models may be formed on the basis of shared social attitudes of groups. Personal opinions, and the discourse expressing them, may thus be more or less in accordance with group attitudes, and more or less coherent among each other. Empirical research suggests that such attitudinal coherence is more pronounced for those who have political expertise in a specific area than for novices (Judd and Downing 1990). For the discussion of this chapter this also means that extensive and well-structured political representations facilitate comprehension of political affairs (politicians, political issues, political stories in the media, etc.) (Fiske, Lau and Smith 1990).

Ideologies

Finally, it will be assumed that the social representations (knowledge, attitudes) shared by a group may be organized by underlying ideologies. Ideologies are by definition general and abstract, because they must apply to many different attitudes in different social domains. Thus, a racist ideology may control attitudes about immigration, but also on housing, work, education or the culture of immigrants or minorities (for details, see van Dijk 1991, 1998a). The level of abstraction and complex control of social cognition requires extensive social learning from experience (models) - or direct indoctrination. Therefore ideologies are acquired relatively late in development and not in the same detailed way by all group members. Some group experts (ideologues) will have more extensive ideologies than 'ordinary' group members (see Judd and Downing 1990; Powell 1989; Zaller 1990). However, to be a member of an ideological group (and to identify with such a group) will probably require that one accepts a few core ideological beliefs. Although classical work on political ideologies (Converse 1964) as well as some directions in contemporary social psychology (Billig 1991a, 1991b) deny that people have (stable) ideologies, it seems plausible that for those domains people have social attitudes, such as those that organize their everyday lives, people do have ideologies that organize these attitudes (Milburn 1987). Personal ideological variations expressed in surveys and (other) discourse, can simply be explained in terms of personal opinions as embodied by models of events (personal experiences) and context, and because individuals are members of different social groups, each with their own attitudes and ideologies (Krosnick and Milburn 1990). It is assumed that ideologies are organized first of all by group selfschemata, with such categories as Membership Criteria, Activities, Goals, Values/Norms, Social Position and Resources. These are the categories in which the crucial information is represented that self-defines the own group, as well as its relation to other groups: Who are we, what do we do, with what aims, etc? Within the Social Position category the, possibly, conflictual relationships with other groups may be represented. For our example the group knowledge and opinions expressed by Sir John may be organized by various ideologies, viz., those of nationalism, ethnocentrism, racism and

democracy. Thus, a racist ideology will emphasize (group) knowledge about the vast number of immigrants, about birth rate and about the opposition of ordinary people against further immigration (`enough is enough'). It also controls the attitude about the criminality or aggressiveness of minorities in general, and the representation of Muslims in particular. Nationalist ideology controls shared social opinions about the positive qualities of Us, English (gentle, kind, tolerant, peace-loving), and about the homeland (beloved). Democratic ideology organizes the general attitudes about the need for ordinary people to have a voice, to be able to vote, and to be able to express their views about their everyday lives and experiences, including immigration. More specifically, Sir John defends a populist version of democracy, which claims to listen to the opinion of ordinary (working-class) people, while ignoring those of the elites (intellectuals, etc.). Obviously, Sir John's democratic credentials are strategically displayed as a form of positive selfpresentation both of himself and of his party. Thus, rather typically, he ignores the democratic rights of immigrants.

Political cognition

Concluding remarks The theoretical analysis and descriptions of a specific example given above have shown that in order to understand and explain political discourse, we also need to examine the underlying political cognition of participants in political communication. Instead of simply dealing with such cognition in terms of beliefs and belief systems, a complex framework needs to be elaborated that distinguishes between very different kinds of both personal and socially shared beliefs (see also Seliktar 1986). Such beliefs may be organized in various schematic formats, clustered and assigned a theoretical place in the overall architecture of the social mind. Thus, it was assumed that for all members of a culture we should assume a general Common Ground, largely consisting of undisputed, common sense knowledge. Similarly, for each group we may distinguish between group knowledge and group attitudes organized by fundamental group ideologies. These cultural and group cognitions serve as the basis of personal knowledge and opinions as stored in mental models. These models form the mental basis of all social practices, including discourse production and comprehension. It was finally argued that in order to describe and understand political discourse genres, especially the context, or rather a mental representation of the context (a context model) needs to be taken into account.

Political discourse

After having examined various aspects of political cognition and the way they control the structures of political discourse, let us now reverse the direction of the analysis of the relation between discourse and cognition. That is, we shall focus on some prototypical properties of many political discourse genres, and then try to account for them in terms of underlying political cognition, and indirectly in terms of their functions in the political context and in politics more generally. A review of even a fraction of earlier discourse analytical studies on political text and talk is beyond the scope of this chapter (see the many references to studies of political discourse in other chapters of this book, and the introductions by Chilton and Schaffner 1997 and van Dijk 1997b). The same is true for the more specific analysis of parliamentary debates (for parliamentary debates on minorities and immigration see CarbO 1992, 1995; Martin Rojo and van Dijk 1997). Instead, I shall proceed more theoretically, and merely discuss some structures of political discourse and their relations to political cognition and their functions in the political process. Given the importance of contextualization for the definition of political discourse, I shall pay special attention to the (cognitive) analysis of context.

Context

Before we deal with political discourse structures per se, let us briefly deal with their context. As suggested above, contexts should be defined in terms of participants' mental models of communicative events. That is, they are subjective and evaluative representations of self and other participants, and of the other discourse-relevant categories of communicative situations, such as, e.g. (van Dijk 1997a, 1999). - overall domain (e.g., politics) - overall societal action (legislation) - current setting (time, location) current circumstances (bill to be discussed) - current interaction (political debate) - current discourse genre (speech) - the various types of role of participants (speaker, MP, member of the Conservative Party, white, male, elderly, etc.), - the cognitions of the participants (goals, knowledge, beliefs, etc.). It has also be suggested that the many genres of political discourse (parliamentary debates, laws, propaganda, slogans, international treaties, peace negotiations, etc.) are largely defined in contextual, rather than in textual terms. Political discourse is not primarily defined by topic or style, but rather by who speaks to whom, as what, on what occasion and with what goals. In other words, political discourse is especially 'political' because of its functions in the political process (van Dijk 1997b). Thus, what Sir John has to say is an appropriate 'speech' in parliament only when a number of these specific contextual conditions are satisfied. The Speaker of the House of Commons is partly in control of such situational criteria. For instance, Sir John is only allowed to speak in parliament, for a specific amount of time, and during a specific parliamentary session or debate, because he is an MP, because he represents his party, and because he has obtained the floor from the Speaker. And his speech is politically functional for the political process because he aims to defend a (Tory) Bill presented in parliament against criticism of the (Labour) Opposition. That speakers are aware of such contextual categories is shown by their sometimes explicit indexical descriptions of them. Thus, Sir John, explicitly refers to Setting, Participant roles and aims, when he asks (rhetorically): 'Why are we English members of Parliament here today?' (line 6). And when in the next sentence he explicitly addresses the Opposition, he thus shows that the social-political role of Opponents or Opposition may be a relevant category in a political situation (for details, see e.g., Wilson 1990). Many of the deictic expressions of Sir John's speech presuppose knowledge of other relevant contextual categories such as location (`this small Island') and time ('we now have ethnic minorities') and especially participants in various roles (`as we all know,' `our country,' `we are supposed to represent', 'we in England'). Especially the use of the most typical political pronoun ('our') shows with which groups the speaker identifies himself. Note though that such group membership is not 'objective', but both part of the models and social representations of speakers as group members, and in a particular speech also socially constructed for strategic purposes (`we democrats') and excluding others (`we in England' referring to white rather than black people). The discursive polarization of Us and Them, typical for political discourse, not only reflects mental representations of people talked about (English vs. Muslims), but also the categories of participants (represented in context models) talked to in a communicative situation (We Conservatives vs. Them of the Labour Opposition). Context models also regulate style, such as the formality of designating expressions (`indigenous population', 'influx', etc.) as a function of formal, institutional interaction in parliament, or the use of popular expressions (`enough is enough') as a function of the persuasive strategy of positive selfpresentation of a populist MP who claims to take the perspective of 'ordinary people'. Note that only some of these expressions (such as the use of 'honourable' — abbreviated as 'Hon' in the Hansard transcript — or 'friend' as used to address an MP of the same party) are typical for parliamentary debates. As we have seen, context models also regulate

semantic representations by controlling the selection of relevant information from event models. Sir John knows much more and has many more opinions about immigration and Muslims, but both time constraints, beliefs about the beliefs of the recipients, and strategies of positive self-presentation will determine that some model information is selected for expression and other remains implicit, presupposed or merely hinted at. And the conservative ideology of his party will be instantiated in a context model that favours the selection of beliefs about Our good characteristics and Their bad ones. Context models regulate the pragmatic dimension of political discourse, e.g., the use of speech acts such as the 'rhetorical' questions being expressed in Sir John's speech. He knows that others know, or do not want to know his opinion, and hence he and his recipients know that his questions do not require answers. And indirectly, the use of derogatory terms like 'ifie about the Labour Opposition, implies the accomplishment of an accusation (that Labour is soft on immigration) if we spell out all the relevant context categories of the current situation. Note finally, that the relations between context, context models, discourse and cognition have several directions. Thus, context models constrain text production, resulting in context-bound discourse structures. These again will be interpreted by recipients as properties of the context model of the speaker (his or her interpretation of the Setting, the Current Interaction as well as his/ her the Goals, Knowledge and Opinions). That is, discourse structures may in turn influence recipient models of the context. They may accept these interpretations of the context and construe them, as suggested, in their own context models. On the other hand, they may represent and evaluate the current interaction and especially the speaker in a different way. Thus, whereas Sir John for instance represents white British, including himself, as tolerant, they may reject that opinion. Similarly, they may disagree with the rhetorically suggested problem of immigration, conveyed by him.

Political discourse structures

We have seen that many discourse structures are a function of context models. However, discourse is not only constrained by context models, but also by event models, that is, by the way the speaker interprets the events talked about, as well as by more general social representations shared by group members, as shown above. As suggested, important for the definition of political discourse, is that such structures are relevant for political structures and processes. Thus, contextually, Sir John's speech functions as a contribution to parliamentary decision making and legislation about immigration, which in turn plays a role in the reproduction of ethnic relations and racism in the UK (Solomos and Back 1995; Reeves 1983; van Dijk 1991 1993). More locally, in parliament, his speech functions as a defence of a Bill and as an attack on the Labour opposition. Let us now briefly consider some discourse structures, and show how they are relevant for the political process, as well as for political cognition. We shall assume these structures as such to be known and in no need for theoretical analysis, and especially focus on their political functions. Overall, as we shall see, such structures will follow the global ideological or political strategy of positive self-presentation and negative other presentation (for theoretical analysis and further examples, see van Dijk 1987a, 1993).

Topics

What information is defined and emphasized to be important or topical in (political and other) discourse, is a function of the event and context models of speakers. Thus, typically, negative information about Us, our own group (e.g., racism in Britain), will not be topicalized in Sir John's speech, whereas negative information about Them, the Others (e.g., their alleged aggression) tends to be topicalized. And vice versa: Our positive characteristics (tolerance,

hospitality) will be topical whereas Their positive characteristics will be ignored, down-played or mentioned only in passing. Thus the main topics of Sir John's speech are an expression of his mental model of current immigration in the UK: (T1) Massive immigration is a problem for England. (T2) Immigrants are a threat to our country and culture. (T3) Ordinary English people don't want more immigration. (T4) We can exercise more control over immigration with this Bill. The implied consequence of these topics is that the House should vote for this bill. Apart from reproducing ethnic stereotypes, and from trying to persuade the House to adopt this Bill, this speech at the same time has more direct political function, viz., to warn the Labour opposition not to ignore the 'voice of the people'. Sir John clearly implies with this warning that if we (or Labour) do not listen to ordinary white people, we won't have their support. Empirical research shows that overall topics, issue definitions or 'frames', as provided by the elites, may have a significant effect on interpretation and public opinion (Gamson 1992; Kinder and Sanders 1990).

Schemata

The global schematic organization of discourse is conventional and hence not directly variable because of context constraints: Thus, a parliamentary speech has the same constituent categories whether engaged in by a Conservative or Labour MP. It is especially the order, prominence, kind and extent of the information included in these categories that may vary, and hence be highlighted or mitigated as a function of positive self-presentation and negative other-presentation. Thus, if such a speech would have a global ProblemSolution structure, Sir John may dwell more on the Problem category (the problems allegedly caused by immigrants), than on the Solution category. Parliamentary debates are typically persuasive discourses, in which MP's take political positions, express their opinions and attack those of others within the framework of argumentative structures — one of the most characteristic schematic structures of discourse. Thus, Sir John intends to support a Bill that limits immigration. His arguments that lead to the Conclusion that such a limitation is good for Britain are therefore selected in both his mental models and his conservative attitudes in such a way that they optimally support that conclusion: (a) There are millions of immigrants (b) They have a higher birthrate (c) England is small and already has too many immigrants (d) Our culture is being threatened (e) Especially Muslims are dangerous (f) Ordinary English people will suVer (g) Ordinary people say it's been enough etc. Typical is also the rejection of possible counter-arguments, which happens when he rejects emotional arguments: feelings of guilt should not cloud our judgement; and this restriction is not racist (as some may think), because English are tolerant; and I am not a racist or anti-Muslim, because I admire Muslims. In other words, the selection of negative propositions about immigrants from specific events models (e.g., recent 'eruptions' of Muslims) and general prejudices (`birth rates', etc.) obeys the overall constraint of negative otherrepresentation, which in turn organizes all premises that need to lead to the negative conclusion, viz., that immigration must be curbed. This conclusion, which applies to the current context model is thus at the same time a model of future action in the political context: Immigrants are no longer let it. In sum, also an analysis of political argumentation presupposes various strategic uses of various types of mental representations. 4.2.3 Local semantics We have seen that political context models define what information of models of current events will be relevantly included in discourse or not. This is true both for global (topical) meanings, as well as for local meanings expressed in the actual sentences of text or talk. An important context category controlling this selection is the political ideology of the speaker and the recipients, which also may influence the complexity of

local meanings. Thus, the simplicity of Sir John's argument seems to confirm the often observed lack of conceptual complexity of (especially conservative) radical politicians (Tetlock 1983, 1984, 1993). And conversely, specific semantic structures thus construed may influence the 'preferred' models of recipients who have no alternative knowledge sources (Lau, Smith and Fiske 1991). Thus, many propositions of Sir John's speech are persuasively selected as a function of his mental model of the situation in the UK which in turn is controlled by his conservative, nationalist and racist ideologies, and typically focus on details of Their negative characteristics: (S1) We have allowed hundreds of thousands of immigrants (S2) We now have ethnic minorities of several million people (S3) Their birth rate far exceeds that of the indigenous population (S4) What will be the effect on our religion, morals, customs habits and so on? (S5) Already there have been some dangerous eruptions from parts of the Muslim community (S6) The fears that those dangerous eruptions engender (S7) Large numbers of immigrants living there Exaggeration, numbers, contrast, and metaphor (`eruption') and other rhetorical moves further enhance this ideologically biased selection of negative propositions from Sir John's event model. The overall implication of such propositions is that They (Muslims) are a threat to Us. The only positive proposition about Muslims (line 12), might in such a dominant topology of negative meanings be read as a disclaimer that has the strategic function of positive self-presentation (van Dijk 1987a, 1993). Indeed, it is also the only part of the speech where Sir John speaks about himself. On the other hand, the short speech does emphasize the positive qualities of (white) British people, as we have seen above, thus contrasting Us and Them, as usual, and as analyzed before. Note though that his positive reference to ordinary English people need not be an expression of his social representations of ordinary people. As an arch-conservative it is unlikely that Sir John is really fond of 'the people' and their will. Rather, then, his positive description is a 'populist' strategy of positive self-presentation (I, we are democratic, We listen to the people), and an implied critique of Labour (who does not listen to the people). That is, we see that not all meanings derive from ideologically based models of events, but may also be inspired by context models featuring images of Us (Conservatives) and Them (Labour) and the goals of political action (defend a Bill). For the same reason, critical recipients will probably hear such positive references to ordinary people not as genuine opinions but merely as moves of strategic political interaction. More generally, then, a cognitively based political analysis of local meanings will try to relate the selection of propositions expressed in text and talk to underlying event and context models as well as socially shared (group) representations such as knowledge, attitudes and ideologies. Thus, whether or not local meaning is explicit or implicit, asserted or presupposed, detailed or global, general or specific, direct or indirect, or blatant or subdued, will typically be a function of the ideologically based event models. As is the case in our example, this will generally mean that negative meanings about the Others will tend to be selected, emphasized, explicit, detailed, specific, direct or blatant, whereas mitigations, disclaimers or denials are rather a function of positive self-presentation (or avoiding a bad impression) as regulated by context models.

https://www.greenpeace.de/sites/www.greenpeace.de/files/bewertung_monsanto_studie_mon863_seralini_0.pdf

Background information. MON 863 is a GM maize from the first generation, second category of GMOs; i.e. genetically modified to produce a pesticide. The first generation of GMOs commercialized in open fields since 1995 either tolerate a pesticide for the first category (72% of GMOs tolerate for instance mainly the herbicide Roundup, like NK603 maize from Monsanto) or produce a pesticide for the second category (generally around a kg/ha, like artificial Bt toxins in MON810 or MON863 maize ; these different insecticides are produced in 20% of GMOs). The second generation of GMOs (8% of total) developed from 1998 make both : producing and tolerating a pesticide. Then virtually all GMOs commercialized in agriculture have been designed to contain pesticides that they absorb and / or produce (all the remaining characters are less than 1%). The third and fourth generations are anticipated from the actual experiments in fields to produce two insecticides and to tolerate one or two herbicides. MON. The genetic modification has inserted an artificial genetic construction, called the transgene, 863 description by particle bombardment by chance in the maize genome from immature cells. These cells have then regenerated new transformed plants, so called GMOs. Everyone agrees that this may have created insertional mutagenesis effects that are not visible by the compositional analysis ; this kind of analysis by « substantial equivalence » can by definition only be partial. From a reductionist point of view, the hypothesis taken is that an artificial genetic modification by particle bombardment (or by an equivalent method) does not create more risk than unknown genetic effects possibly visible after classical hybridization. This hypothesis has not been demonstrated yet, but has been used to avoid labelling and long-term feeding studies with GMOs in North America. ….

It can be concluded that no independent study of toxicity has been made besides the experiments directed and interpreted by Monsanto Company. In addition, the interpretations of data may be controversial. There was no open access to the organs from treated rats and slides of these organs. There was never new experiments after discussions, but only new analysis and interpretations of the same MON 863 data by experts designed by Monsanto. Moreover and for instance, for all GMOs untill recent years, the so called independant external expert paid by the French government to be referee for CGB was, according a written rule, chosen during numerous years by the Company in the last round of propositions. Even if that is not always the case now, it should be checked if this kind of practice is followed by other state members or EU. All these practices avoid a contradictory expertise similar to judiciary processes, but this could be organized easily. The secret on confidential raw data claimed by Monsanto has no scientific basis ; all scientific data have to be published or transparent are they are in the commercial request files to the state members, like it is done for public research, if the GMO is for public feeding. The directive CEE/2001/18 indicates that the risk assessment on health and environment should be public for GMOs. Whatever the results are, in such a controversial case, the minimum could be, like in public research, to repeat the experiment since no clear conclusion can be drawn from these data. CRIIGEN proposes to conduct new experiments, also longer and on two generations of rats, and is asking for financial support for this project, which is ready to go with OCDE standards. If we compare GMOs with other products tested for their safety, the closest example possible is for pesticides, since this MON 863 GMO has been genetically modified in order to produce a pesticide. The european legislation concerning pesticides has been for a long time directed by the directive CEE/91/414, and its successive adaptations. This legislation precises that, concerning the toxicity study of pesticides in food and feed for humans and other mammals, three month tests should be done for three species (generally rat, mouse, and dog),

and that pesticides are given in food during one year to one species (generally dog) and during two years on another one (generally rat, this approximately corresponds to its life span). There is no scientific reason to avoid these kind of experiments for actual GMOs. The in vivo tests are the final security that should be undertaken to test unknown products that do not present in vitro negative effects. However, specific in vitro tests should be stimulated before, and one can note that there is very large room for still improvements in GMO files, i.e. more tests with the Bt artificial Cry3Bb1 toxin extracted from the maize and incubated with human cells in this case.
In the case of MON 863 maize, it should be noted that the 90 day toxicology study appears to be the best one and the longest one that has been performed with mammals. It shows significant effects in 4 comparison to control laboratory animals, and in some instances in comparison to the so called very large "reference group", the existence of which may be questioned. In all instances, it is recommended that : 1) The statistical analysis should be repeated with independant experts and the tests put on a website for the scientific community 2) The experiment should be repeated if the significant effects are confirmed, in comparison with the proper control group 3) Other experiments with rats during one and two years, and also with two other species of mammals should be conducted in order to study potential adverse effects of the genetic modification, to know if these are linked to the Cry3Bb1 toxin or not, like it is regularly performed for other pesticides. GMOs should not be exempted from pesticide evaluation if they contain pesticides or specific pesticide metabolites. It is the case obviously for MON 863. 4) In vitro studies should be performed with Cry3Bb1 extracted from maize and various mammalian cells including human digestive epithelia and hepatocytes In the absence of such results, the agreement for maize release into the environment, for food, feed or cultures, may present a serious risk for human and animal health and the release should be forbidden. One should also underline that today no legal obligation is given to companies concerning the exact basic number of studies they have to accomplish on mammals eating GMOs and their length. This lack of precision (Entransfood project) is difficult for public authorities and companies. For the public, it could appear very normal to give GMOs during 2 years to rats before giving them to the entire population during their entire life, including babies and elderly or sick people. To standardize the GMOs tests in Europe on three mammalian species, from 3 months to 2 years, could finally help companies to reach homogenized standards and to commercialize high quality food and feed. Biotechnology will be more easily accepted in such conditions.

https://www.greenmedinfo.com/article/evaluation-health-risk-studies-main-commercialized-edible-gmos

Abstract

We summarize the major points of international debate on health risk studies for the main commercialized edible GMOs. These GMOs are soy, maize and oilseed rape designed to contain new pesticide residues since they have been modified to be herbicide-tolerant (mostly to Roundup) or to produce mutated Bt toxins. The debated alimentary chronic risks may come from unpredictable insertional mutagenesis effects, metabolic effects, or from the new pesticide residues. The most detailed regulatory tests on the GMOs are three-month long feeding trials of laboratory rats, which are biochemically assessed. The tests are not compulsory, and are not independently conducted. The test data and the corresponding results are kept in secret by the companies. Our previous analyses of regulatory raw data at these levels, taking the representative examples of three GM maize NK 603, MON 810, and MON 863 led us to conclude that

hepatorenal toxicities were possible, and that longer testing was necessary. Our study was criticized by the company developing the GMOs in question and the regulatory bodies, mainly on the divergent biological interpretations of statistically significant biochemical and physiological effects. We present the scientific reasons for the crucially different biological interpretations and also highlight the shortcomings in the experimental protocols designed by the company. The debate implies an enormous responsibility towards public health and is essential due to nonexistent traceability or epidemiological studies in the GMO-producing countries.

The United States is the largest grower of commercial crops that have been genetically engineered in the world, but not without domestic and international opposition. In 2004, Mendocino County, California became the first and only American county to impose a ban on the "Propagation, Cultivation, Raising, and Growing of Genetically Modified Organisms", the measure passing with a 57% majority. Numerous organizations based in the U.S. oppose or have concerns about genetic engineering for various reasons. Groups such as the Center for Food Safety, the nonprofit science advocacy group Union of Concerned Scientists, Greenpeace and the World Wildlife Fund have expressed concerns about the FDA's lack of a requirement for additional testing for GMO's, lack of required labeling and the presumption that GMO's are "Generally Recognized as Safe" (GRAS). Some of these groups have questioned whether the FDA is too close to companies that seek approval for their products. Although there have been no recorded instances of harm to human health due to the consumption of genetically engineered foods, there is concern over their impact on health. One of the largest food recalls in US history, was the Taco Bell GMO recall, where a Bt corn plant not approved for human consumption due its risk as an allergen, had contaminated food products like the tacos at Taco Bell, and a huge percentage of US's seed supply. No health problems were linked to Starlink corn, and subsequent evaluations of the Bt trait determined that there is medium risk to human health. Baer (after 2015 merger with Monsanto, based in Creve Coeur, Missouri) is the leading producer of genetically engineered seed. It sells 90% of the world's GE seeds. The USA is the largest commercial grower of genetically modified crops in the world. United States regulatory policy is governed by the Coordinated Framework for Regulation of Biotechnology. The United States is not a signatory to the Cartagena Protocol on Biosafety. For a genetically modified organism to be approved for release it is assessed by the USDA, the FDA and the EPA. USDA evaluates the plant's potential to become weeds, the FDA reviews plants that could enter or alter the food supply and the EPA regulates the genetically modified plants with pesticide properties. Most developed genetically modified plants are reviewed by at least two of the agencies, with many subject to all three. Final approval can still be denied by individual counties within each state.

The debate on the safety of genetically modified organisms (GMOs) used for food and feed is still very lively throughout the world, more than 15 years after their first commercial release. Huge social, economical, and political issues have been raised. Unfortunately, although some stakeholders claim that a history of safe use of GMOs can be upheld, there are no human or animal epidemiological studies to support such a claim as yet, in particular because of the lack of labeling and traceability in GMO-producing countries. As a matter of fact, 97% of edible GMOs among cultivated GMOs (soy, corn and oilseed rape or canola, excluding cotton) are grown in South and North America [6], where GMOs are not labeled. All these plants have been modified to tolerate and/or produce one or more pesticides [6], and contain therefore such residues at various levels [5]. Most are Roundup residues (it is a major herbicide used worldwide and tolerated by about 80% of GMOs). Other residues are from modified Bt insecticide toxins, which are directly

synthesized by the GM plants from transgenes. The debate on health risks is first of all based on theoretical considerations, and second on the knowledge derived from mammalian experiments fed on GMOs. The latter experiments are not systematically performed, and can be part of non-compulsory regulatory tests. The scientific question about edible GMOs health risks amounts to how they have been tested and interpreted, especially in mammals. Nutritional tests with weight, bone mass, and for instance milk or meat production are available, as well as acute toxicological tests with recombinant proteins, in vitro digestibility of transgenic proteins, and limited compositional analysis among other data. However, the possible chronic side effects of pesticide residues are not scientifically assessed, whereas these edible GMOs were modified in order to either tolerate or produce such residues in the first place. In addition, unpredictable metabolic effects, such as metabolic interferences, or direct or indirect insertional mutagenesis consequences cannot be excluded. All these possibilities have been summarized. For instance, insertion of the transgene in varieties producing Cry1Ab toxin caused a complex recombination event, leading to the synthesis of new RNA products encoding unknown proteins [7], or/and to metabolic pathways variations which caused up to 50% changes in measured osmolytes and branched aminoacids [8]. The frequency of such events in comparison to classical hybridization is by nature unpredictable and new proteomic technologies have shown to be effective in evaluating the potential collateral effects due to insertional mutagenesis [9]. ……

Conclusions and perspectives

Controversy on biological interpretations is a usual way of advancement in science. It would however have been beneficial for the acceptance of biotechnologies by the public at large, to close this scientific debate by longer, more detailed, and transparent toxicological tests on GMOs, and in particular twenty years ago when the most widely grown GMOs were still experimental. We wish to reassert that our work does not claim to demonstrate the chronic toxicity of the GMOs in question, especially since it is based on the data originating from insufficient tests that were accepted by regulatory authorities and Monsanto et al., a fact for which we are not in any way responsible. For the regulatory authorities, as well as Monsanto et al, these tests prove chronic innocuousness for mammalian and human public health. And they claim it is not essential to demonstrate the GMOs innocuousness. This again raises the same issues and consequences. We have revealed the inefficiency both of these tests and of their statistical analysis and biological interpretations, for the various reasons detailed above. However, some of the in vivo 90-day tests are not performed any longer today to get worldwide commercial authorizations, especially for GMO with “stacked events” (i.e., producing one or several insecticides and tolerating one or two herbicides), and this is even more seriously inadequate since the so-called “cocktail effects” are not taken into consideration. The same controversy took place (February 2010) in India, in relation to the authorization process for a transgenic eggplant that produces a new Bt insecticide. This authorization was based on three-month tests on three mammals and other animals for shorter times, which presented significant biological effects after this GM consumption. The same arguments were used in the debate in India. But in this case, the government decided to take the time to study chronic health effects, following our expertise, and therefore to implement a moratorium. In the present case, we wish to underline that the commercial GMOs in question contain pesticide residues, some of which have been demonstrated as human cellular endocrine disruptors at levels around 1000 times below their presence in some GM feed. Such Roundup residues are present in more than 80% of edible cultivated GMOs. This does not exclude other possible effects. As a conclusion, we call

for the promotion of transparent, independent and reproducible health studies for new commercial products, the dissemination of which implies consequences on a large scale. Lifetime studies for laboratory animals consuming GMOs must be performed, by contrast to what is done today, like the two-year long tests on rats for some pesticides or some drugs. Such tests could be associated to transgenerational, reproductive or endocrine research studies. And moreover, shortcomings in experimental designs may raise major questions on other chemical authorizations.

https://www.sciencenews.org/article/how-new-wuhan-coronavirus-stacks-up-against-sars-mers

March 22, 2020 there were 316,039 coronavirus 2019-nCoV cases and 13,597 deaths. In Italy - 53,578 cases, and 4,825 deaths. Coronaviruses, one of a variety of viruses that cause colds, have been making people cough and sneeze seemingly forever. But occasionally, a new version infects people and causes serious illness and deaths. That is happening now with the coronavirus that has killed at least 26 people and sickened at least 900 since it emerged in central China in December. The World Health Organization is monitoring the virus's spread to see whether it will turn into a global public health emergency (SN: 1/23/20). Among the ill are two people in the United States who contracted the virus during travels in China. A Chicago woman in her 60s is the second U.S. case of the new coronavirus, the Centers for Disease Control and Prevention confirmed January 24 in a news conference. Officials are currently monitoring 63 people across 22 states for signs of the pneumonia-like disease, including fever, cough and other respiratory symptoms. Of those people, 11 have tested negative for the virus. Two, including the newest case and another patient in Seattle, tested positive, the CDC reported (SN: 1/21/20). France reported two cases on January 24 as well, the first in Europe. Much still remains unknown about the new coronavirus (SN: 1/10/20), which for now is being called 2019 novel coronavirus, or 2019-nCoV. Lessons learned from previous coronavirus outbreaks, including severe acute respiratory syndrome, or SARS, and Middle East respiratory syndrome, or MERS, may help health officials head off some of the more serious consequences from this virus outbreak. What are coronaviruses? Coronaviruses are round and surrounded by a halo of spiky proteins, giving them a resemblance to a crown or the sun's wispy corona. Four major categories, or genera, of coronavirus exist. They're known by the Greek letters alpha, beta, delta and gamma. Only alpha and beta coronaviruses are known to infect people. These viruses spread through the air, and just four types (known as 229E, NL63, OC43 and HKU1) are responsible for about 10 to 30 percent of colds around the world. What makes a virus a coronavirus is only loosely enshrined in its DNA. "The coronavirus designation is less about the genetics and more about the way it appears under a microscope," says Brent C. Satterfield, cofounder and chief scientific officer of Co-Diagnostics, a company based in Salt Lake City and Gujarat, India, that is developing molecular tests for diagnosing coronavirus infections. Coronaviruses' genetic makeup is composed of RNA, a single-stranded chemical cousin of DNA. Viruses in the family often aren't very similar on the genetic level, with some types having more differences between them than humans have from elephants, Satterfield says. The new virus's proteins are between 70 and 99 percent identical to their counterparts in the SARS virus, says Karla Satchell, a microbiologist and

immunologist at Northwestern University Feinberg School of Medicine in Chicago. Usually coronavirus illnesses are fairly mild, affecting just the upper airway. But the new virus, as well as both SARS and MERS, are different. Those three types of betacoronaviruses can latch onto proteins studding the outside of lung cells, and penetrate much deeper into the airway than cold-causing coronaviruses, says Anthony Fauci, director of the U.S. National Institute of Allergy and Infectious Diseases in Bethesda, M.D. The 2019 version is "a disease that causes more lung disease than sniffles," Fauci says. Damage to the lungs can make the viruses deadly. In 2003 and 2004, SARS killed nearly 10 percent of the 8,096 people in 29 countries who fell ill. A total of 774 people died, according to the World Health Organization. MERS is even more deadly, claiming about 30 percent of people it infects. Unlike SARS, outbreaks of that virus are still simmering, Fauci says. Since 2012, MERS has caused 2,494 confirmed cases in 27 countries and killed 858 people. MERS can spread from person to person, and some "superspreaders" have passed the virus on to many others. Most famously, 186 people contracted MERS after one businessman unwittingly brought the virus to South Korea in 2015 and spread it to others. Another superspreader who caught MERS from that man passed the virus to 82 people over just two days while being treated in a hospital emergency room (SN: 7/8/16). Right now, 2019-nCoV appears to be less virulent, with about a 4 percent mortality rate. But that number is still a moving target as more cases are diagnosed, Fauci says. As of January 23, the new coronavirus had infected more than 581 people, with about a quarter of those becoming seriously ill, according to the WHO. By January 24, the number of reported infections had risen to at least 900. An analysis of the illness in the first 41 patients diagnosed with 2019-nCoV from Wuhan, China suggests that the virus acts similarly to SARS and MERS. Like the other two, 2019-nCoV causes pneumonia. But unlike those viruses, the new one rarely produces runny noses or intestinal symptoms, researchers report January 24 in the Lancet. Most of the people affected in that first group were healthy, with fewer than a third having chronic medical conditions that could make them more vulnerable to infection.

https://www.livescience.com/coronavirus-myths.html

As the novel coronavirus continues to infect people around the world, news articles and social media posts about the outbreak continue to spread online. Unfortunately, this relentless flood of information can make it difficult to separate fact from fiction — and during a viral outbreak, rumors and misinformation can be dangerous. Here at Live Science, we've compiled a list of the most pervasive myths about the novel coronavirus SARS-CoV-2 and COVID-19, the disease it causes, and explained why these rumors are misleading, or just plain wrong. Standard surgical masks cannot protect you from SARS-CoV-2, as they are not designed to block out viral particles and do not lay flush to the face, Live Science previously reported. That said, surgical masks can help prevent infected people from spreading the virus further by blocking any respiratory droplets that could be expelled from their mouths. Within health care facilities, special respirators called "N95 respirators" have been shown to greatly reduce the spread of the virus among medical staff. People require training to properly fit N95 respirators around their noses, cheeks and chins to ensure that no air can sneak around the edges of the mask; and

wearers must also learn to check the equipment for damage after each use. Myth: You're way less likely to get CoV-2, than the flu. Not necessarily. To estimate how easily a virus spreads, scientists calculate its "basic reproduction number," or R0 (pronounced R-nought). R0 predicts the number of people who can catch a given bug from a single infected person, Live Science previously reported. Currently, the R0 for SARS-CoV-2, the virus that causes the disease COVID-19, is estimated at about 2.2, meaning a single infected person will infect about 2.2 others, on average. By comparison, the flu has an R0 of 1.3. Perhaps, most importantly, while no vaccine exists to prevent COVID-19, the seasonal flu vaccine prevents influenza relatively well, even when its formulation doesn't perfectly match the circulating viral strains. Myth: The virus is just a mutated form of the common cold. No, it's not. Coronavirus is a large family of viruses that includes many different diseases. SARS-CoV-2 does share similarities with other coronaviruses, four of which can cause the common cold. All five viruses have spiky projections on their surfaces and utilize so-called spike proteins to infect host cells. However, the four cold coronaviruses — named 229E, NL63, OC43 and HKU1 — all utilize humans as their primary hosts. SARS-CoV-2 shares about 90% of its genetic material with coronaviruses that infect bats, which suggests that the virus originated in bats and later hopped to humans. Evidence suggests that the virus passed through an intermediate animal before infecting humans. Similarly, the SARS virus jumped from bats to civets (small, nocturnal mammals) on its way into people, whereas MERS infected camels before spreading to humans. Myth: Getting COVID-19 is a death sentence. That's not true. About 81% of people who are infected with the coronavirus have mild cases of COVID-19, according to a study published Feb. 18 by the Chinese Center for Disease Control and Prevention. About 13.8% report severe illness, meaning they have shortness of breath, or require supplemental oxygen, and about 4.7% are critical, meaning they face respiratory failure, multi-organ failure or septic shock. The data thus far suggests that only around 2.3% of people infected with COVID-19 die from the virus. People who are older or have underlying health conditions seem to be most at risk of having severe disease or complications. While there's no need to panic, people should take steps to prepare and protect themselves and others from the new coronavirus. Myth: Pets can spread the new coronavirus. Probably not to humans. One dog in China contracted a "low-level infection" from its owner, who has a confirmed case of COVID-19, meaning dogs may be vulnerable to picking up the virus from people, according to The South China Morning Post. The infected Pomeranian has not fallen ill or shown symptoms of disease, and no evidence suggests that the animal could infect humans. Several dogs and cats tested positive for a similar virus, SARS-CoV, during an outbreak in 2003, animal health expert Vanessa Barrs of City University told the Post. "Previous experience with SARS suggests that cats and dogs will not become sick or transmit the virus to humans," she said. "Importantly, there was no evidence of viral transmission from pet dogs or cats to humans." Just in case, the Centers for Disease Control and Prevention (CDC) recommends that people with COVID-19 have someone else walk and care for their companion animals while they are sick. And people should always wash their hands after snuggling with animals anyway, as companion pets can spread other diseases to people, according to the CDC. Myth: Lockdowns or school closures won't happen in the US. There's no guarantee, but school closures are a common tool that public health officials use to slow or halt the spread of contagious diseases. For instance, during the swine flu pandemic of 2009, 1,300 schools in the U.S. closed to reduce the spread of the disease, according to a 2017 study of the Journal of Health Politics, Policy and Law. At the time, CDC guidance recommended that schools close for between 7 and 14 days, according to

the study. While the coronavirus is a different disease, with a different incubation period, transmissibility and symptom severity, it's likely that at least some school closures will occur. If we later learn that children are not the primary vectors for disease, that strategy may change, Dr. Amesh Adalja, an infectious disease expert at the Johns Hopkins Center for Health Security in Baltimore, previously told Live Science. Either way, you should prepare for the possibility of school closures and figure out backup care if needed. Lockdowns, quarantines and isolation are also a possibility. Under section 361 of the Public Health Service Act (42 U.S. Code § 264), the federal government is allowed to take such actions to quell the spread of disease from either outside the country or between states. State and local governments may also have similar authority. Myth: Kids can't catch the coronavirus. Children can definitely catch COVID-19, though initial reports suggested fewer cases in children compared with adults. For example, a Chinese study from Hubei province released in February found that of more than 44,000 cases of COVID-19, about only 2.2% involved children under age 19. However, more recent studies suggest children are as likely as adults to become infected. In a study reported March 5, researchers analyzed data from more than 1,500 people in Shenzhen, and found that children potentially exposed to the virus were just as likely to become infected as adults were, according to Nature News. Regardless of age, about 7% to 8% of contacts of COVID-19 cases later tested positive for the virus. Still, when children become infected, they seem less likely to develop severe disease, Live Science previously reported. Myth: If you have coronavirus, "you'll know" No, you won't. COVID-19 causes a wide range of symptoms, many of which appear in other respiratory illnesses such as the flu and the common cold. Specifically, common symptoms of COVID-19 include fever, cough and difficulty breathing, and rarer symptoms include dizziness, nausea, vomiting and a runny nose. In severe cases, the disease can progress into a serious pneumonia-like illness — but early on, infected people may show no symptoms at all. U.S. health officials have now advised the American public to prepare for an epidemic, meaning those who have not traveled to affected countries or made contact with people who recently traveled may begin catching the virus. As the outbreak progresses in the U.S., state and local health departments should provide updates about when and where the virus has spread. If you live in an affected region and begin experiencing high fever, weakness, lethargy or shortness of breath, or or have underlying conditions and milder symptoms of the disease, you should seek medical attention at the nearest hospital, experts told Live Science. From there, you may be tested for the virus, though as of yet, the CDC has not made the available diagnostic exam widely available. Myth: The coronavirus is less deadly than the flu. So far, it appears the coronavirus is more deadly than the flu. However, there's still a lot of uncertainty around the mortality rate of the virus. The annual flu typically has a mortality rate of around 0.1% in the U.S. So far, there's a 0.05% mortality rate among those who caught the flu virus in the U.S. this year, according to the CDC. In comparison, recent data suggests that COVID-19 has a mortality rate more than 20 times higher, of around 2.3%, according to a study published Feb. 18 by the China CDC Weekly. The death rate varied by different factors such as location and an individual's age, according to a previous Live Science report. But these numbers are continuously evolving and may not represent the actual mortality rate. It's not clear if the case counts in China are accurately documented, especially since they shifted the way they defined cases midway through, according to STAT News. There could be many mild or asymptomatic cases that weren't counted in the total sample size, they wrote. Vitamin C supplements will stop you from catching COVID-19. Researchers have yet to find any evidence that vitamin C supplements can render people immune

to COVID-19 infection. In fact, for most people, taking extra vitamin C does not even ward off the common cold, though it may shorten the duration of a cold if you catch one. That said, vitamin C serves essential roles in the human body and supports normal immune function. As an antioxidant, the vitamin neutralizes charged particles called free radicals that can damage tissues in the body. It also helps the body synthesize hormones, build collagen and seal off vulnerable connective tissue against pathogens. So yes, vitamin C should absolutely be included in your daily diet if you want to maintain a healthy immune system. But megadosing on supplements is unlikely to lower your risk of catching COVID-19, and may at most give you a "modest" advantage against the virus, should you become infected. No evidence suggests that other so-called immune-boosting supplements — such as zinc, green tea or echinacea — help to prevent COVID-19, either. Be wary of products being advertised as treatments or cures for the new coronavirus. Since the COVID-19 outbreak began in the United States, the U.S. Food and Drug Administration (FDA) and the Federal Trade Commission (FTC) have already issued warning letters to seven companies for selling fraudulent products that promise to cure, treat or prevent the viral infection. Myth: It's not safe to receive a package from China. It is safe to receive letters or packages from China, according to the World Health Organization. Previous research has found that coronaviruses don't survive long on objects such as letters and packages. Based on what we know about similar coronaviruses such as MERS-CoV and SARS-CoV, experts think this new coronavirus likely survives poorly on surfaces. A past study found that these related coronaviruses can stay on surfaces such as metal, glass or plastic for as long as nine days, according to a study published Feb. 6 in The Journal of Hospital Infection. But the surfaces present in packaging are not ideal for the virus to survive. For a virus to remain viable, it needs a combination of specific environmental conditions such as temperature, lack of UV exposure and humidity — a combination you won't get in shipping packages, according to Dr. Amesh A. Adalja, Senior Scholar, Johns Hopkins Center for Health Security, who spoke with Live Science's sister site Tom's Hardware. And so "there is likely very low risk of spread from products or packaging that are shipped over a period of days or weeks at ambient temperatures," according to the CDC. "Currently, there is no evidence to support transmission of COVID-19 associated with imported goods, and there have not been any cases of COVID-19 in the United States associated with imported goods." Rather, the coronavirus is thought to be most commonly spread through respiratory droplets. Myth: You can get the coronavirus if you eat at Chinese restaurants in the US. No, you can't. By that logic, you'd also have to avoid Italian, Korean, Japanese and Iranian restaurants, given that those countries have also been facing an outbreak. The new coronavirus doesn't just affect people of Chinese descent.

https://www.bionity.com/en/encyclopedia/Colony_Collapse_Disorder.html

According to the Agriculture and Consumer Protection Department of the United Nations Food and Agriculture Organization (FAO), the total value of global crops pollinated by honey bees was estimated at nearly USD$200 billion in 2005. According to FAO data, the world's beehive stock rose from around 50 million in 1961 to around 83 million in 2014, averaging about 1.3% annual growth. Average annual growth has accelerated to 1.9% since 2009. Honey-producing colonies in the United States increased 4% to 2.8 million in 2018. In the United States, shortages of bees have increased the cost to farmers renting them for pollination services by up to 20%. In

the six years leading up to 2013, more than 10 million bee colonies across the world were lost, often to CCD, nearly twice the normal rate of loss. Colony collapse disorder (CCD) have been known by various names (including disappearing disease, spring dwindle, May disease, autumn collapse, and fall dwindle disease). It is an abnormal phenomenon that occurs when the majority of worker bees in a colony disappear, leaving behind a queen, plenty of food, and a few nurse bees to care for the remaining immature bees. Such disappearances have occurred sporadically throughout the history of apiculture. After the invention of genetically modified crops and plants this event became very frequent. This syndrome was renamed colony collapse disorder in late 2006 in conjunction with a drastic rise in reports of disappearances of western honey bee (Apis mellifera) colonies in North America. Beekeepers in most European countries have observed a similar phenomenon since 1998, especially in Southern and Western Europe. The Northern Ireland Assembly received reports of a colonies decline greater than 50%. Colony collapse disorder causes significant economic losses because many agricultural crops depend on pollination by western honey bees. Several possible causes for CCD have been proposed. Suggested causes include genetic factors (GM crops massive introduction in the USA, genetically modified (GM) crops with pest control characteristics such as transgenic maize); pesticides; infections with various pathogens, especially those transmitted by Varroa and Acarapis mites; malnutrition; loss of habitat; immunodeficiencies; changing beekeeping practices; or a combination of factors. A large amount of speculation has surrounded the contributions of the neonicotinoid family of pesticides to CCD, but many collapsing apiaries show no trace of neonicotinoids. In 1977, the GMOs were invented. From 1977 to 2006, dramatic reductions continued in the number of feral honey bees in the US and a significant though somewhat gradual decline in the number of colonies maintained by beekeepers. This decline included cumulative losses from all factors, such as urbanization, pesticide use, tracheal and Varroa mites, and commercial beekeepers retiring and going out of business. However, in late 2006 and early 2007, the rate of attrition was alleged to have reached new proportions, and people began to use the term colony collapse disorder to describe the sudden rash of disappearances (or sometimes spontaneous hive collapse or the Mary Celeste syndrome in the United Kingdom). Losses had remained stable since the 1990s at 17–20% per year, attributable to a variety of factors, such as mites, diseases, and management stress. In the winter of 2004–2005, a spontaneous collapse occurred and was attributed to varroa mites (the "vampire mite" scare), though this was ultimately never confirmed. The first report of CCD was in mid-November 2006 by a Pennsylvania beekeeper overwintering in Florida. By February 2007, large commercial migratory beekeepers wintering in California, Florida, Oklahoma, and Texas had reported heavy losses associated with CCD. Their reports of losses varied widely, ranging from 30% to 90% of their bee colonies; in some cases, beekeepers reported losses of nearly all of their colonies, with surviving colonies so weakened that they might no longer be able to pollinate or produce honey. In late February 2007, some larger non-migratory beekeepers in the mid-Atlantic and Pacific Northwest regions also reported significant losses of more than 50%. Colony losses were also reported in five Canadian provinces, several European countries, and countries in South and Central America and Asia. In 2010, the United States Department of Agriculture reported that data on overall honey bee losses for 2010 indicated an estimated 34% loss, which is statistically similar to losses reported in 2007, 2008, and 2009. Fewer colony losses occurred in the US over the winter of 2013–2014 than in recent years. Total losses of managed honey bee colonies from all causes were 23.2% nationwide, a marked improvement over the 30.5% loss

reported for the winter of 2012–2013 and the eight-year average loss of 29.6%. After bee populations dropped 23% in the winter of 2013, the Environmental Protection Agency and Department of Agriculture formed a task force to address the issue. In the six years leading up to 2013, more than 10 million beehives were lost, often to CCD, nearly twice the normal rate of loss.

https://www.greenpeace.org/eu-unit/issues/nature-food/945/commission-prepares-to-authorise-three-gm-maize-varieties/

In 2017 the only GM crop grown in the EU was Monsanto's maize MON810. The European Commission and a handful of EU governments (the Czech Republic, Portugal, Romania, Slovakia, Spain) in 2017 wanted to renew the license for Monsanto's maize MON810 and to grow more genetically modified (GM) crops. They EU Commission wanted to authorize the cultivation of two GM maize varieties (DuPont Pioneer's 1507 and Syngenta's Bt11). The proposed authorizations would only be valid in 9 out of 28 European Union (EU) countries, as well as in three regions (England in the UK, Flanders and the Brussels region in Belgium). The other EU countries and the remaining four regions in the UK and Belgium have used the EU's new opt-out mechanism to prevent GMOs from being grown on their territories, regardless of EU authorizations. The Commission is hoping that national governments will accept EU approval of GM crops as long as they are able to rule out their cultivation in their own territories. Greenpeace EU food policy director Franziska Achterberg said: "GM crops have no place in sustainable farming. Rightly, the majority of EU governments and parliamentarians have rejected them. But now it's time for all EU countries to think beyond their borders. Governments should oppose environmentally damaging GM crops anywhere, not just in their own backyard, to protect wildlife and allow farmers and consumers to go GM-free." Monsanto's MON810, DuPont Pioneer's 1507 Syngenta's Bt11 have all been engineered to produce certain toxins, which are derived from those produced by a soil bacterium, Bacillus thuringiensis (Bt). The Bt toxins are meant to kill the larvae of specific insect pests, such as the European corn borer, but impacts are wider. Two of the crops, 1507 and Bt11, are also genetically modified to withstand spraying with glufosinate ammonium, a potent herbicide. Glufosinate is classified as toxic for reproduction and its uses have been restricted in the EU since 2013 because of concerns regarding its toxicity, particularly to small mammals such as voles. The cultivation of herbicide-tolerant GM crops usually leads to greater use of those herbicides. Monsanto's MON810 was authorized in 1998. It is grown in five EU countries (Spain, Portugal, the Czech Republic, Slovakia and Romania) on about 130,000 ha, representing just over one per cent of the total area used to grow maize in Europe. It has unmanageable risks The Bt toxins produced by these GM crops are likely to harm not only the targeted pests but also other, non-target insects including butterflies, ladybird beetles and, if residues enter watercourses, also aquatic insects. Harm to butterflies and moths could be "substantial" in the case of 1507, according to modeling by the European Food Safety Authority (EFSA). In countries where Bt crops are grown, insect pests have become resistant to the toxins resulting in "substantial economic losses for farmers", according to a recent review of GM crops by the US National Academies of Science. The Commission believes these risks can be controlled if "refuge areas" and "isolation distances from protected habitats" are prescribed. However, the experience with mandated refuge areas is poor, as they are usually not complied with and therefore ineffective. The Commission has also proposed to instruct farmers not to use glufosinate-based herbicides on GM crops 1507 and Bt11

to ensure that the restrictions placed on these herbicides are "known and respected by farmers". However, it is unclear how such a ban can be enforced.

The producers of Bt crops have claimed that their use will increase yields and reduce insecticide use. However, according to the US National Academies of Science, "the nationwide data on maize, cotton, or soybean in the United States do not show a significant signature of genetic engineering technology on the rate of yield increase". The amount of insecticidal Bt protein released per hectare is similar or even greater than the amount of conventional insecticides it replaces. The GM maize plants produce the Bt toxins throughout their lifetime, from germination to harvest, in all parts of the plant, including pollen. By planting the Bt crops, farmers decide to use an insecticide regardless of the actual pest pressure that may or may not occur during the growing season. This is not only contrary to ecological farming principles but also to the principles of "integrated pest management", by which EU farmers are mandated since 2014 to "keep the use of pesticides and other forms of intervention to levels that are necessary, e.g. by reduced doses, reduced application frequency or partial applications".

The three GM maize varieties are old products that received regulatory approval in the US as early as 1995 (MON810), 1996 (Bt11) and 2001 (1507). Monsanto's GM maize MON810 has already come off patent. In the US, where 92 per cent of maize acreage consists of GM varieties, the three crops under consideration have largely been replaced with crops that combine ("stack") multiple genetically engineered traits. For example, DuPont Pioneer's 2017 Product Use Guide for the US does not list GM maize 1507, but only GM maize that combines 1507's Bt toxin and glufosinate tolerance with tolerance to glyphosate. Similarly, Syngenta's US offer no longer includes Bt11 but only stacked GM maize varieties that also tolerate spraying with glyphosate. The proposed authorization of the three single-trait maize varieties is likely to open the door to these newer, stacked GM crops. Stacked GM crops are the seed industry's response to the evolution of resistance in pests and weeds. They can produce up to five Bt toxins and tolerate spraying with two different herbicides. The potential safety implications of combined Bt toxins, and Bt toxins combined with herbicide tolerances, are poorly understood. The European Food Safety Authority (EFSA) has even stopped testing all stacked GM crops individually. In 2015, it rubberstamped eleven GM maize varieties at once, and signed off on another twenty this year, all to be allowed for import to (but not growing in) the EU. In countries where stacked GM crops are grown, this has pulled farmers into a transgenic treadmill, whereby pests and weeds develop multiple resistances that necessitate ever greater use of Bt toxins and herbicides – to the benefit of agrochemical companies, and to the detriment of farmers and the environment.

Pioneer, Syngenta and Monsanto started the ongoing procedures for EU (re-)authorization in 2001 (1507), 2003 (Bt11) and 2007 (MON810). In 2009, only six out of 25 EU member states backed the Commission's proposals to authorize 1507 and Bt11. When the Commission interrupted the authorization procedure for 1507, the General Court of the European Union ruled that it "failed to fulfil its obligations", following a complaint by Pioneer. In February 2014, again only five out of 28 member states supported the authorization of 1507, with 19 countries opposing and four abstaining. The European Parliament called on the Commission to reject the authorization by 385 votes to 201. The Commission has not pursued the other two (re-)authorization procedures (Bt11 and MON810) since 2009. On 6 October 2016, the European Parliament opposed the authorization of the three GM maize lines in Europe. Instead, the Commission pushed for a law that would allow EU countries to "opt out" of EU-wide GM crop authorizations. The law was adopted in 2015, and 19 governments asked that all or part of their

territory be excluded from the authorization of GM maize 1507, Bt11 and MON810. The Commission is hoping that national governments will accept authorizations that may allow farmers in neighbouring countries to grow such crops even if they prohibited cultivation on their own territory.

Contamination of non-GM maize fields with GM maize is common, with five to ten incidents per year recorded globally since 1999. A recent study indicates that, contrary to previously held views, maize pollen can travel airborne up to 4 kilometres. In Europe, rules to prevent such contamination, and allow "co-existence", differ from country to country. For instance, Spain, where most GM maize is grown, has no specific rules on isolation distances, buffer zones or mandatory information for the authorities or neighbouring farmers. Experience shows that "co-existence" has failed, and that it is almost impossible for organic and conventional farmers to grow maize in areas where GM maize MON810 is grown. In its risk assessments of the three crops, EFSA has acknowledged adverse effects on non-target butterflies and moths. However, it disregarded similar effects on a myriad of other species, including aquatic insects, which can have repercussions on ecosystems by disrupting the food chain. It also failed to assess the impact of current agricultural practices such as glyphosate use, which could enhance the toxicity of Bt proteins to aquatic life affected by runoffs. Likewise, EFSA also dismissed any possible health impacts on vertebrates, including mammals, and played down possible safety implications of the genomic irregularities resulting from the genetic engineering process. Another possible risk is linked to teosinte, the ancestor of cultivated maize, which is growing in GM maize fields in Spain. Teosinte could cross-breed with GM maize and start also producing Bt toxin, which would result in higher fitness of a weed plant that has already colonised hundreds of hectares of Spanish maize fields. EFSA has brushed off these fears saying that "teosinte already has higher levels of pest resistance/tolerance than maize". According to EFSA, environmental harm is "unlikely" if farmers manage to "control and/or eradicate teosinte and its progeny in infested agricultural areas", and if GM contaminated teosinte does not spread beyond these areas. Neither of these can be claimed with certainty.

Greenpeace demands governments to reject the authorization of the three GM crops based on the documented risks to the environment and the uncertainties arising from the substantial gaps in their safety assessments. This is the only way to protect the environment, and to allow farmers to grow conventional or organic maize. GM crops have no place in sustainable farming. They come with unacceptable risks, resulting both from the genetic engineering process and the engineered characteristics. At the same time, they have failed to deliver on the promises made by their producers. Instead of following the example of the US and the handful of other countries where GM crops are grown, the European Union should turn to ecological farming methods to protect the environment and our health.

https://www.who.int/ru/news-room/fact-sheets/detail/ebola-virus-disease

Болезнь, вызванная вирусом Эбола.

Болезнь, вызванная вирусом Эбола (БВВЭ), является тяжелой, часто смертельной болезнью людей. Вирус передается людям и распространяется среди людей от человека человеку. В ходе прежних вспышек показатели летальности составляли от 25% до 90%. Средний коэффициент летальности БВВЭ составляет около 50%. Эбола попадает в

популяцию человека в результате тесного контакта с кровью, выделениями, телом или жидкостями организма инфицированных существ, например фруктовых летучих мышей, обнаруженных мертвыми или больными во влажных лесах. Впервые БВВЭ появилась в 1976 году в ходе двух одновременных вспышек в Нзаре (сейчас Южный Судан), в Ямбуку и в селении рядом с рекой Эбола (Демократическая Республика Конго). От названия реки Эбола болезнь получила свое название. В восточных районах ДРК принятие мер в области общественного здравоохранения затруднялось обстановкой войны в районе эпидемии. Вспышка в Западной Африке в 2014-2016 гг. была самой крупной и сложной со времени обнаружения этого вируса в 1976 году. Согласно данным центра по контролю заболеваний США, к 20.10.2015 г. заболели 30939 человек, из которых умерли 12910 (42 %). Эпидемия 2018–2019 гг. началась в Гвинее и перекинулась через сухопутные границы в Сьерра-Леоне и Либерию. Вакцины для защиты от Эболы в 2020 году находились в процессе разработки и применялись в качестве вспомогательного средства для ограничения распространения вспышек Эболы в Гвинее и Демократической Республике Конго. Вирус Эбола распространяется в результате передачи от человека человеку при контакте через: а) слизистые оболочки глаз, носа и рта; б) ранки на коже; в) кровь или физиологические жидкости заболевшего или умершего от Эболы человека; г) предметы, загрязненные физиологические жидкостями (слюна, кровь, рвота, кал) заболевшего Эболой лица; д) тело умершего от Эболы. Погребальные обряды, которые включают в себя прямой контакт с телом умершего, могут передавать вирус Эбола. Труп остается заразным, поскольку в нем сохраняется вирус. Медицинские работники заражаются при оказании помощи пациентам с подозреваемой или подтвержденной БВВЭ при недостаточном соблюдении норм противовирусной защиты. Инкубационный период от момента заражения вирусом до появления симптомов составляет до 21 дня. Инфицированный Эболой человек не может распространять болезнь до момента появления симптомов, которые включают: лихорадку, слабость, мышечные боли, головную боль, боль в горле. За этим следуют: рвота, диарея, сыпь, нарушения функций почек и печени и в некоторых случаях, как внутренние, так и внешние кровотечения (например, выделение крови из десен, кровь в кале). Лабораторные тесты выявляют низкие уровни белых кровяных клеток и тромбоцитов наряду с повышенным содержанием ферментов печени. Образцы, взятые у пациентов для анализа, представляют чрезвычайно высокую биологическую опасность. Лабораторное тестирование образцов проводят в условиях максимальной биологической изоляции. Во время перевозок внутри страны и за рубеж все биологические образцы помещают в системы тройной упаковки. При уходе за больными необходима высокая степень защиты: респираторы, изолирующие очки, препятствующие попаданию вируса на слизистую оболочку глаз, защитный комбинезон и перчатки, которые подлежат изоляции и немедленной утилизации при снятии.

Ушакова Е. С., Шацкий О. Е. Парадигма полета на Марс // Молодой ученый. — 2017. — № 48. — С. 51-55. — URL https://moluch.ru/archive/182/46711/

В настоящий момент Марс находится в центре научных исследований с точки зрения колонизации, решения демографических проблем Земли, создания «Колыбели Человечества» на случай глобального катаклизма на Земле. [1] Растения и животные не смогут выжить на Марсе, где средняя поверхностная температура составляет от -87 до -5 °С. Для достижения Марса необходимо преодолеть множество ограничивающих факторов. Если сообщить ракете начальную скорость 16,7 км/сек, она достигнет

поверхности Марса за 70 суток. Дальнейшее увеличение начальной скорости приведет к соответствующему сокращению времени полета и повышению объемов топлива. Посадка на поверхность Марса представит серьезные трудности, так как скорость к моменту встречи с планетой достигнет 20,9 км/сек и ее торможение потребует значительного расхода горючего. Данную проблему можно решить путем использования ядерной энергии. [2] Современной разработкой является ядерная энергетическая установка мегаваттного класса. Она основана на комбинации ядерного реактора и ионных двигателей. [3] Достоинства ядерной энергетической установки – это возможность долететь до Марса за 1,5 месяца и вернуться обратно, в то время как полёт с использованием современных двигателей может занять полтора года без возможности вернуться. Марсианские вирусы представляют значительную угрозу для колонистов. Любой патоген Марса способен убить все живое на Земле. Космонавтов, собирающихся в путешествие на Марс, необходимо по возвращении на Землю поместить в долгосрочный карантин. Но также существует вероятность, что марсианские микробы могут попасть на Землю с поверхности корабля, оборудования или скафандров. Более того, космонавты могут привезти их в собственных телах. Изучением данной проблемы занялись инженеры НАСА. BILI (Bio-Indicator Lidar Instrument) — это новая система сканирования, предназначенная для обнаружения патогенных микробов на Земле, но ученые полагают, что она сможет сыграть значительную роль и при исследовании Марса на предмет наличия на его поверхности следов биологической жизни. Два ультрафиолетовых лазера BILI способны обнаружить молекулы биологических маркеров в марсианской пыли. Устройство может сравнительно быстро просканировать довольно большую площадь планеты. Ограничение для полета на Марс играет человеческий фактор. Наблюдение за здоровьем после полета в космос показало, что у космонавтов Международной космической станции понизилось содержание гемоглобина и кровяное давление. Из-за невесомости ослабели мышцы и кости. За месяц полета терялось до 2 % костной массы. Уже через неделю пребывания в невесомости объём сердца уменьшается на четверть, с чем и связано ослабление кровообращения. [4] Для устранения негативных последствий невесомости учеными предлагается использование космонавтами на борту экзоскелета - устройства, предназначенного для восполнения утраченных функций, увеличения силы мышц человека и расширения амплитуды движений за счёт внешнего каркаса и приводящих частей. Экзоскелет повторяет биомеханику человека для пропорционального увеличения усилий при движениях. Разработкой экзоскелета занимается команда российских учёных из проекта ExoAtlet - первого российского медицинского экзоскелета для реабилитации, социальной адаптации и интеграции людей с нарушением локомоторных функций нижних конечностей. В настоящее время создано несколько действующих прототипов изделия.

Особенности перевода научного текста.

Характерными особенностями перевода текстов научного стиля являются информативность (содержательность) текста, логичность (строгая последовательность, четкая связь между основной идеей и деталями), точность и объективность; ясность и понятность, которые вытекают из этих особенностей. Основной стилистической чертой перевода научного текста является точное и четкое изложение материала при почти

полном отсутствии тех выразительных элементов, которые придают речи эмоциональную насыщенность. Главный упор в переводе делается на логической, а не на эмоционально–чувственной стороне излагаемого материала. При переводе научного текста переводчик должен стремиться к тому, чтобы исключить возможность произвольного толкования существа трактуемого предмета, вследствие чего в этом переводе почти не используются такие выразительные средства, как метафоры, метонимии и другие стилистические фигуры, которые широко используются в художественных произведениях для придания речи живого, образного характера. Переводчик научных текстов, как правило, избегает применения выразительных средств вторичной номинации, чтобы не нарушить основного принципа научного языка – точности и ясности изложения мысли. Это приводит к тому, что перевод научного и научно-технического текста кажется несколько суховатым, лишенным элементов эмоциональной окраски. Приведённые особенности стиля перевода полностью касаются перевода текстов диссертаций, научных монографий, сборников докладов конференций, статей, рефератов, учебников.

1. Переведенные научные и научно-технические тексты имеют несколько градаций. Они отличаются друг от друга не только по области науки или техники, к которой они относятся, но и по степени их специализации.
2. Лексика перевода научного текста имеет три основных пласта: общеупотребительные слова, общенаучные слова и термины.
3. В стиле перевода научных текстов используется много абстрактной лексики.
4. Признаком переведенного научного теста является насыщенность терминами.
5. В переводе научных текстов употребляется большое количество специальных терминов.
6. Терминологическая лексика обычно составляет 15–25 процентов общей лексики, использованной в переведенном тексте.
7. Помимо терминов, стиль перевода научных текстов использует общенаучные и общеупотребительные слова.
8. Специалисты перевода научных текстов широко применяют специальную лексику, которая включает многочисленные производные от терминов, слова, используемые при описании связей и отношений между терминологически обозначенными понятиями и объектами, их свойствами и особенностями, а также целый ряд общеупотребительных слов, употребляемых, однако в строго определенных сочетаниях и тем самым специализированных.

Имеется несколько вариантов текстового представления научных результатов: а) Монография – научное или научно-популярное издание, содержащее полное и всестороннее исследование одной проблемы или темы и принадлежащее одному или нескольким авторам. Сборник научных трудов – это текст, содержащий исследовательские материалы научных учреждений, учебных заведений или обществ. Материалы конференции (съезда, симпозиума) – это непериодический сборник, содержащий итоги доклады, рекомендации, решения конференции. Препринт – это научное издание, содержащее материалы предварительного характера, опубликованные до выхода в свет издания, в котором они могут быть помещены. Тезисы докладов/сообщений научной конференции (съезда, симпозиума) – это научный непериодический сборник, содержащий опубликованные до начала конференции материалы предварительного характера (аннотации, рефераты докладов и/или сообщений). Часто тезисы докладов, имеющие объем 1–2 страницы текста, вообще не учитываются как публикации. Наибольший интерес для исследователей представляют научные статьи в научных рецензируемых журналах и труды (или материалы) конференций. Научный журнал – это журнал, содержащий статьи и материалы о теоретических исследованиях, а также статьи и материалы прикладного характера,

предназначенные научным работникам. Научная статья – это законченное и логически цельное произведение, освещающее какую-либо тему, входящую в круг проблем, связанных с темой диссертации. Как правило, научные статьи представлены несколькими разновидностями: краткое сообщение о результатах научно-исследовательской работы; собственно научная статья, в которой достаточно подробно излагаются результаты работы; историко-научная обзорная статья; дискуссионная статья; научно-публицистическая статья; рекламная статья.

Существуют общепринятые требования, предъявляемые к научной статье. Статья должна включать: аннотацию; вводную часть, ключевые слова; основную часть; заключительную часть; список литературы. Авторская аннотация к статье является краткой характеристикой работы, содержащей только перечень основных вопросов. В аннотации определяются основные идеи работы, соединяются вместе и представляются в достаточно краткой форме. Аннотация, представляя содержание всей работы, включает в себя: актуальность, постановку проблемы, пути решения поставленной проблемы, результаты и выводы. На каждый из разделов может отводиться по одному предложению. Поэтому четкость изложения мысли является ключевым моментом при переводе аннотации. Переводчику рекомендуется использовать известные общепринятые термины; для четкости выражения мысли – устойчивые обороты. Например, такие как «В работе рассмотрены / изучены / представлены / проанализированы / обобщены / проверены / предложено / обосновано…» При переводе аннотации необходимо избегать излишнего показа деталей текста. Во вводной части переводчик должен как можно более близко к тексту перевести раздел обоснования актуальности рассматриваемого вопроса и новизны работы, а также предложения, которые описывают цель и задача исследования. Мнеее строго можно передать содержание актуальности темы – степень ее важности в данный момент и в данной ситуации для решения данной проблемы (задачи, вопроса). Это не может повлиять существенно на передачу смысла основной части статьи, где описываются результатов исследования, даются рекомендации применения методов решения значимых научно-практических задач. Переводчику требуется самому понять содержание новизны, то есть то, что отличает результат исследования, описанного в данной статье, от результатов других авторов. Повышенное внимание при переводе требуется уделять адекватности передачи информации об анализе источников и литературы по тематике исследования; переводу формулировки гипотезы исследования, самого исследования, его результатов и практических рекомендаций, объяснению полученных результатов исследования. При переводе основной части статьи переводчику необходимо постоянно ориентироваться на поставленную в статье цель, сверяя каждое переведенное положение текста с целью и задачами, сформулированными во введении.

Перевод с английского языка на русский текстов научного и научно–технического стиля сложен, поскольку переводчик, как правило, встречается с информацией, знакомой узким специалистам и экспертам в различных областях науки. Он должен при переводе понять смысл содержания статьи, найти вариант передачи смысла новых терминов и постулатов, которые описывают самостоятельную теоретическую и практическую проблему, решение которой требует высокого профессионализма, сбора дополнительной информации для обеспечения адекватности перевода. Использование автоматизированных компьютерных программ перевода текста научной статьи, как правило, не дает положительного результата, поскольку в тексте остается значительное количество мест, которые переведены с ошибками, искажениями или полностью неверно. Автоматические программы перевода с английского языка можно использовать лишь для предварительной подготовки «сырого» варианта русского текста, который потребуется полностью проверить, внести корректировку, исправить лексические и стилистические ошибки, отредактировать окончательный вариант перевода.

8. МАТЕРИАЛЬНО-ТЕХНИЧЕСКОЕ ОБЕСПЕЧЕНИЕ ДИСЦИПЛИНЫ

№ п/п	Наименование оборудованных учебных кабинетов, лабораторий	Перечень оборудования и технических средств обучения
1	Компьютерный класс Аудитория 302	11 компьютеров Системный блок: Процессор Intel(R) Core(TM) i3-2100 CPU @ 3.10GHz 4096 МБ ОЗУ HDD Объем: 320 ГБ Монитор Acer P206HL - 20 дюймов Акустическая система Sven Интерактивная доска Smart Board Проектор Epson EH-TW535W 1. ЭБС НЭБ 2. Электронный каталог АИБС «MARK – SQL» 3. Электронная библиотека МГГЭУ 4. Лингафонный кабинет
2	Лекционная аудитория Аудитория 304	Системный блок: Процессор Intel(R) Core(TM) i3-2100 CPU @ 3.10GHz 4096 МБ ОЗУ HDD Объем: 320 ГБ Монитор Acer P206HL - 20 дюймов Акустическая система Sven Интерактивная доска Smart Board Проектор Epson EH-TW535W 1. ЭБС НЭБ 2. Электронный каталог АИБС «MARK – SQL» 3. Электронная библиотека МГГЭУ
3	Аудитория 511	Системный блок: Процессор Intel(R) Core(TM) i3-2100 CPU @ 3.10GHz 4096 МБ ОЗУ HDD Объем: 320 ГБ Монитор Acer P206HL - 20 дюймов Акустическая система Sven Интерактивная доска Smart Board Проектор Epson EH-TW535W 1. ЭБС НЭБ 2. Электронный каталог АИБС «MARK – SQL» 3. Электронная библиотека МГГЭУ
4	Аудитории 309, 310, 311, 410, 411, 412	Проектор переносной Epson EB-5350 (1080p) -1 шт. Экран переносной Digis 180x180 - 1 шт. Ноутбук HP ProBook 640 G3 (Intel Core i5 7200U, 4gb RAM, 250 SSD) -1 шт.